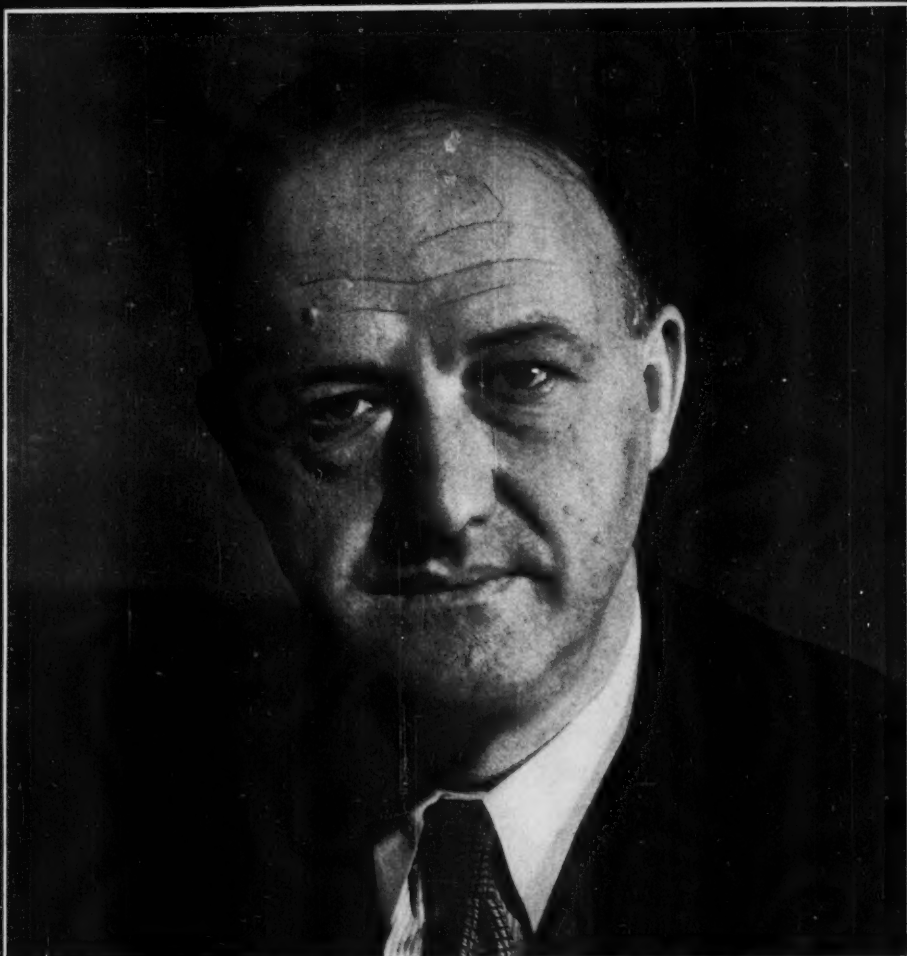
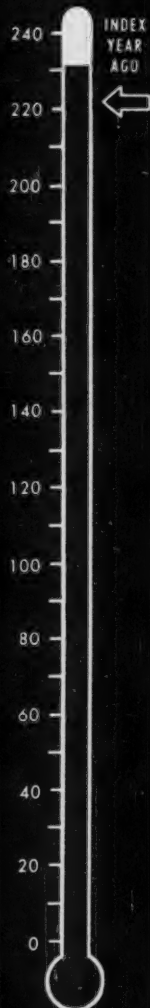


BUSINESS WEEK

THE FIGHT OVER
Gas for New England
PAGE 46



Britain's Butler: "We shall be bankrupt, idle, and hungry" (page 181)

A MCGRAW-HILL PUBLICATION

NOV. 24, 1951

TWENTY-FIVE CENTS

One of a new series of advertisements designed to tell the G-E Silicone Story to industry.

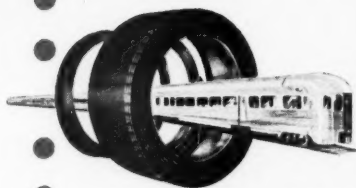
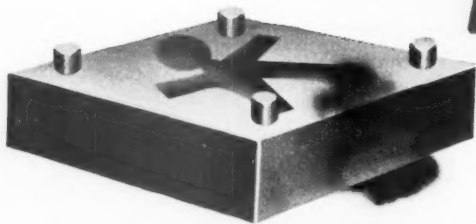
How YOU Profit from the Way G-E Silicones

Keep Things from Sticking

Among the many amazing properties of General Electric silicones is their remarkable *release* factor—their ability to prevent unwanted adhesion.

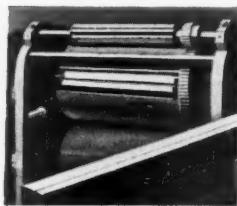
This property makes G-E silicones important as release agents in many industries. They release metal, rubber and plastics from metal, keep ice from adhering to both metal and rubber. Typical applications making use of this property of G-E silicones include the release of tires from molds, bread from baking pans, and flatirons from starched fabrics.

Is sticking a problem in your business?



Silicones Stop Sticking of Steam Line Gaskets

Vapor Heating Corporation has eliminated the sticking and tearing of rubber gaskets in steam line couplings between railroad cars simply by impregnating the gaskets with G-E silicone fluids. Impervious to steam and pressure, these fluids provide permanent lubrication for the full life of the gaskets.



Silicones Stop Sticking of Sealer Bars

G-E silicone rubber-covered sealer bars eliminate sticking problems on this high-speed bag-making machine. G-E silicone rubber neither oxidizes nor softens—won't get brittle or stick to Cellophane, metal foil or other bag materials.

HOW CAN YOU PROFIT FROM G-E SILICONES?

If you have a sticking problem that may be solved through the remarkable release ability of G-E silicones, you'll want to investigate them. Remember, too, that G-E silicones also resist extremes of heat and cold, are inert to chemical reaction, and possess many unique surface characteristics. *Chemical Department, General Electric Co., Pittsfield, Mass.*

Write for a free copy of the informative brochure, "The Silicone Story," to Section N-3, General Electric Company, Waterford, New York. (In Canada: Canadian General Electric Co., Ltd., Toronto.)

GENERAL  ELECTRIC



It Takes 500 Tons of Equipment for Just One Telephone Exchange

Five hundred tons of equipment and 62,000 man-hours of work are needed to install just one 10,000-line Dial Telephone Exchange.

Here's the story of months of work condensed into two minutes of reading time. (Bear with us, please, if several of the words get technical.)

There are 1800 crossbar switches, 4000 multi-contact relays and 65,000 conventional relays. These automatic switching mechanisms open or close millions of telephone circuit paths.

Eighty miles of cable are needed to connect all this apparatus. There are 2,600,000 soldered connections, each one a careful hand operation.

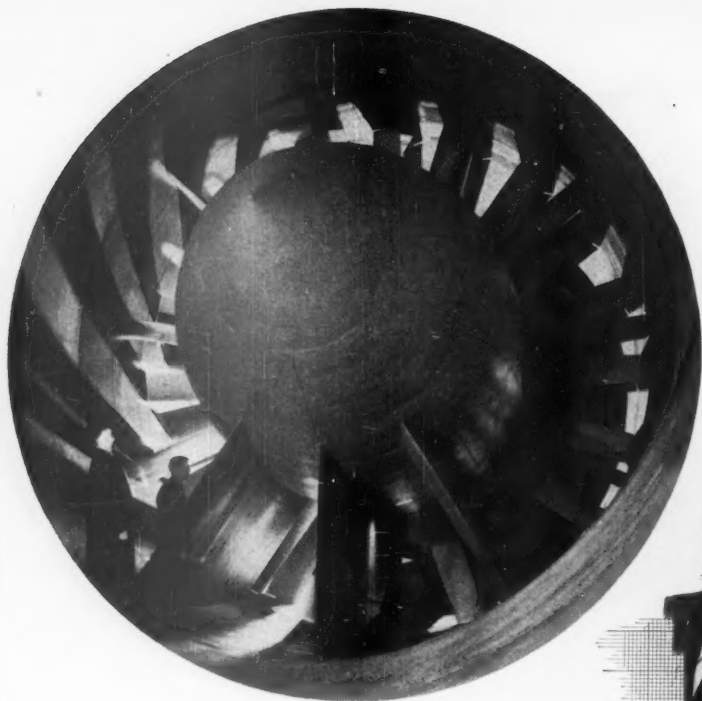
All that is for only one Telephone Exchange to serve one community. At present-day prices, the cost runs to \$1,500,000.

The money for these new facilities must come largely from investors who are willing to put their savings in the business.

Only through reasonable earnings can the telephone company attract the new money that is needed to do the job.

BELL TELEPHONE SYSTEM





MACHINE DESIGNER

SKF ENGINEER



TOGETHER

they strike a "blow" for aircraft progress

This new wind tunnel, the largest private one in the world, provides for testing full-scale power plants at air speeds up to 200 mph, as well as scale models of aircraft and propellers at air speeds of 600 mph. To meet the unprecedented demands of its 7,000 hp fan, its builders, Pratt & Whitney, selected SKF Spherical Roller Bearings.

Why, when today it's pretty hard *not* to buy good bearings, are most wind and vehicular tunnel fans SKF-equipped?

Simply because designers of air circulation equipment know, when they specify SKF, they get other things along with the bearings... the teamwork of experienced bearings engineering specialists at SKF's headquarters; the teamwork of SKF field men who are qualified specialists in the application of bearings to air circulation equipment designs; the expanding production facilities of efficient, up-to-date plants.

Whatever your product, your engineers and designers can have this helpful teamwork simply by asking for it.

7171

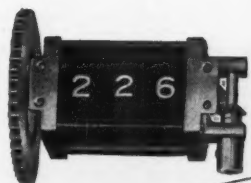
SKF[®]
BALL AND ROLLER BEARINGS



WHY SKF IS PREFERRED BY ALL INDUSTRY

integrity • craftsmanship • metallurgy
tolerance control • surface finish • product uniformity
engineering service • field service

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.—manufacturers of SKF and HESS-BRIGHT bearings.



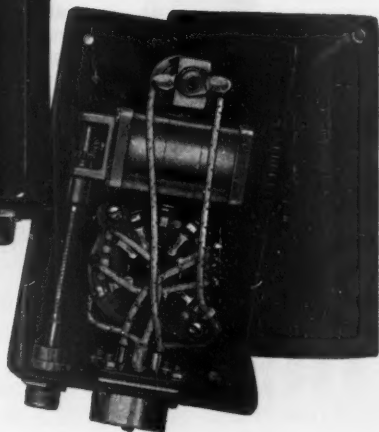
Added Evidence
that _____

*Small Component...
or Complete Unit...
You* can count on
getting whatever
You* need—*

Everyone Can Count on VEEDER-ROOT

This REEL CONTROL BOX, complete with its built-in counting mechanism, indicates the number of feet of antenna reeled in and out of certain types of military aircraft. Manufactured completely by Veeder-Root, including outside bakelite cover and box, this unit shows another imaginative application of the universal language of direct-reading Countrol.

Now if you, in any of your defense work,* have a counting problem, then you can count on Veeder-Root to help you in every possible way.



VEEDER-ROOT INCORPORATED

"The Name That Counts"

HARTFORD 2, CONN. • GREENVILLE, S.C.

Montreal 2, Canada • Dundee, Scotland

Offices and agents in principal cities

"Counts Everything on Earth"

If you make construction equipment . . .



.....WIRE WITH Belden AND CUT COSTS

CUT COSTS with a specialized cable—improved cables developed specifically for the welding industry.

CUT COSTS in lowered production waste and fewer rejections upon inspection. Cut costs by reducing customer complaints—cutting repair comebacks—for low-cost maintenance and insurance of customer good will.

CUT COSTS: specify Belden Welding Cable. Check its advantages with Belden engineers, today.

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Chicago 44, Illinois

Plus Protection
in Belden
Welding Cable

Belden

WIREMAKER FOR INDUSTRY

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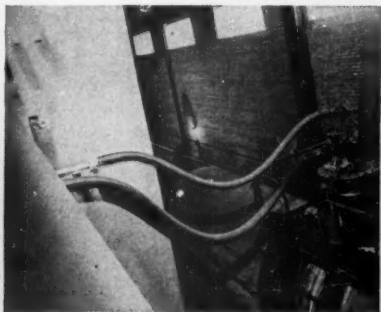
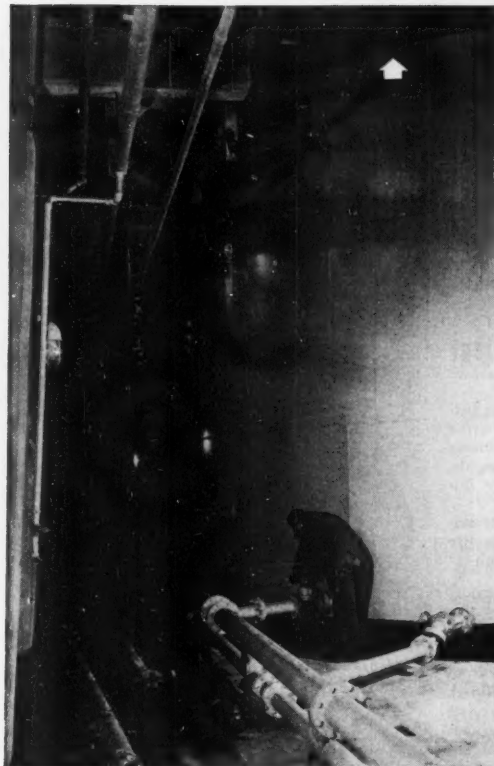
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BUSINESS WEEK • Nov. 24, 1951

What's U. S. Rubber doing to aid sewage treatment?



Ferric chloride is carried by U.S. Giant Acid Hose from tank cars to large acid storage tanks. The air hose throughout the plant is U.S. Brand.

In a large midwestern sewage plant, the acid storage tanks, pipes and fittings have U.S. Rubber linings. Conveyor belts, air and acid hose likewise are of U.S. Rubber manufacture. And the filters are equipped with Uscolite plastic piping and fittings developed by "U.S." engineers. All the above mentioned products are resistant to the highly corrosive action of ferric chloride, used in sewage treatment.

This installation — involving so many different products — affords convincing evidence of the scope and versatility of U.S. Rubber engineering skill.

These large storage tanks are protected by U.S. Permabond Rubber Lining especially compounded to resist corrosive action of ferric chloride solutions. Size of the tanks made it necessary to rubber line and vulcanize them in the field. Lining runs over the tops of tanks and extends down the outside 18 inches. See arrow.



22 U.S. Rubber conveyor belts run below the floor, collecting sludge as it drops from the filters, and carrying it to the driers.

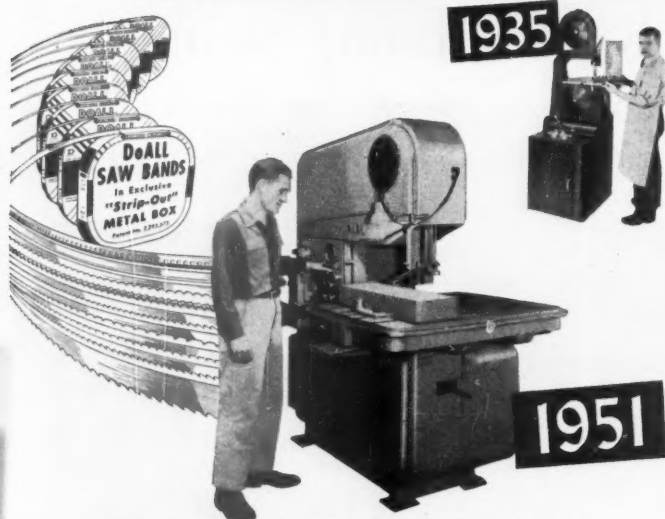
PRODUCTS OF



UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

DoALL'S PHENOMENAL EVOLUTION



How Contour Machining Was Developed Into One of the Most Versatile and Economical Machining Processes Known to Industry

WHEN "Contour Sawing" was first introduced, the DoALL was primarily recognized for its speed in cutting dies. Great savings in time and material resulted wherever this new principle of slicing off a whole section (instead of removing one chip at a time) was used. As a result, uses for this revolutionary machining process began to multiply immediately.

New application possibilities prompted new developments in machines and in band tools to be used with them. For example, blade life was increased from 23 minutes to 300 minutes in slicing through 1" thick tool steel.

These improvements opened up further new production applications. With the increase in applications and better band tools, much heavier machine construction, closer control of feeds, speeds, etc., along with use of coolants, became necessary.

Today the DoALL employs 27 different kinds of band tools, so that on the Contour-matic every known material can be machined. One of these band tools, for example, is a high-speed band carrying abrasive stones which achieves another revolutionary machining process called "Line Grinding." Instead of merely cutting from a point tangent to a round wheel, the Line Grind Bands do precision grinding in hardened steel over the entire face of a curved or flat area.

There are bands for sawing, filing, grinding and polishing operations. There are bands for friction sawing of ferrous materials, knife bands for parting rubber, paper and pliable substances. There are bands with diamonds impregnated on the edge for cutting ceramics and other brittle materials.

The new DoALL with its many cutting tools is today the most versatile of all machine tools. We invite your inquiry for a demonstration in your plant on your work to prove these claims. Ask for Catalog.

THE DoALL COMPANY • 254 N. Laurel Ave., Des Plaines, Illinois

88-1/2

INDUSTRY'S NEW TOOLS **DoALL** 33 SALES-SERVICE STORES

CALL DoALL FOR:

Machine Tools... Gaging Equipment... Tool Steel... Band Tools... Metal Working Supplies

In BUSINESS this WEEK...

• Cheaper

Transatlantic air fares. They are due for a cut, but the carriers still have to get together on how much. P. 22

• Dearer

Farm commodities. Early frost nipped the corn crop. Cotton is getting some special coaching from Washington. P. 166

• Gaining

The Navajo Indians are running their own rehabilitation program now. And they are beginning to get their wampum's worth out of it. P. 138

• Losing

Britain realizes in the midst of its third postwar economic crisis that the real trouble started back in 1900. P. 181

• Flying

The helicopter business. Right now the military has it all sewed up; manufacturers, however, are gunning for the taxi trade. P. 132

• Falling

Anaconda's copper ore. With a little help from gravity, the company's engineers have figured out a way to handle the low-grade stuff. P. 54

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HI-BALLING DOWN THE ROAD a ten-ton trailer gets tires scorching hot . . . a major cause of blowouts. To make tires cooler-running, carcasses are now reinforced with "Cordura." The extra strength of "Cordura" makes possible thinner, stronger sidewalls that have less tendency to build up heat.



Extra strength at no extra cost with this Du Pont yarn

Yarns of Du Pont Cordura® High Tenacity Rayon are stronger than yarns of natural fibers—they are made in continuous filaments with no short lengths to pull apart under strain. This means there are no weak spots in "Cordura" yarn. Moreover, because the number of fibers—and the diameter of each fiber—in this yarn is precisely controlled, "Cordura" is uniform in gauge throughout its length.

"Cordura" is the backbone of a host of new and improved products. It is the core of a new plastic clothesline, the strength of a new tear-resistant laminated paper. It makes conveyor belts thinner yet stronger, V-belts that won't stretch, a garden hose so strong that one manufacturer now offers it with a ten-year guarantee.

No matter where you use yarns in your business, the extra strength of "Cordura" may well be able to help you to improve your product or your process . . . *without increasing cost.*

®REG. U. S. PAT. OFF.

Du Pont "Cordura" High Tenacity Rayon

STRENGTH AT LOW COST

for RAYON . . . for NYLON . . . for FIBERS to come . . . look to DU PONT

WRITE NOW FOR THE FREE BOOKLET "Sinews for Industry." It gives physical properties of "Cordura". . . tells you how Du Pont will help you benefit from the advantages of "Cordura" Rayon. Address: Rayon Division, Room 4421, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.



REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

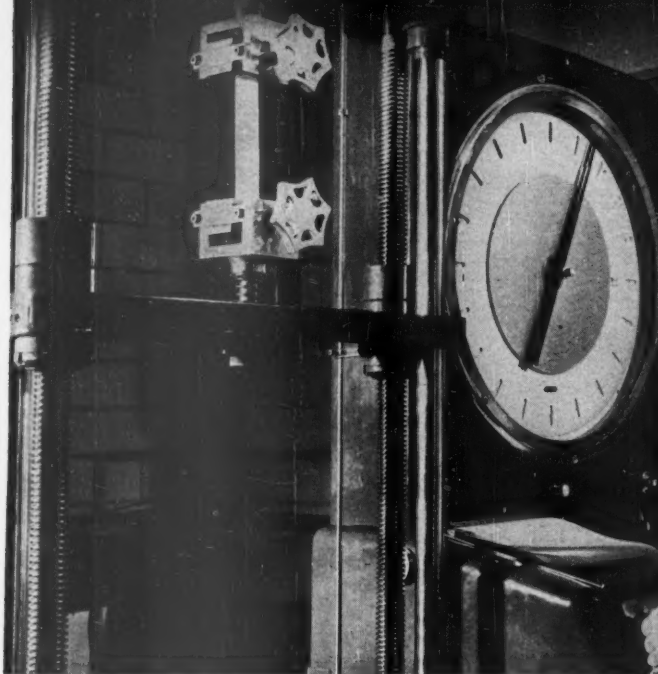
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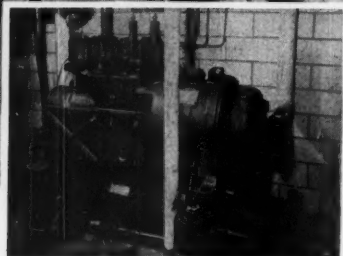
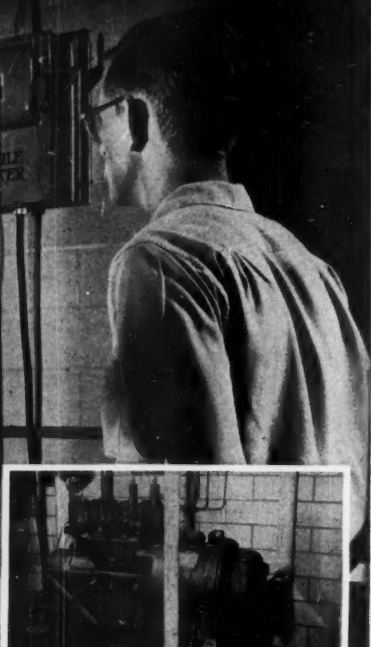
Address



PUTTING *Air* TO WORK FOR CHAMPION PAPER*



Temperatures can be varied here from 60° to 90°F; humidities from 20% to 90%. Westinghouse air conditioning pinpoints temperatures to within plus or minus 2°.



This Westinghouse compressor was sealed when made, will give years of trouble-free service.

A TORTURE CHAMBER AIR CONDITIONED?

Yes. At Hamilton, Ohio, they've set up twentieth-century torture chambers to tear, burst, bend, pull apart and crease paper. Production samples are given the third degree in Champion Paper's two air conditioned research laboratories to test their fitness for many applications.

Why air conditioning? Paper, like many other products, is particular about the climate. Change the temperature—or the humidity—only slightly and you get an entirely different set of values. That's why Westing-

house air conditioning was specified to keep the testing climate just the way they want it—precisely, constantly.

Chances are, your product, your processes, or your employees will do better in Westinghouse engineered air. Let us help you *put air to work* for greater production, higher quality or improved methods. Check the Yellow Pages for your local Westinghouse Air Conditioning Distributor, or write Westinghouse Electric Corporation, Air Conditioning Division, Hyde Park, Boston 36, Massachusetts.

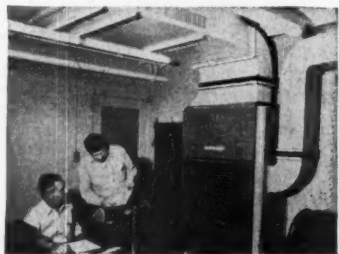
*Installations by The Kuempel Company, Cincinnati, Ohio.

YOU CAN BE SURE...IF IT'S
Westinghouse

J-80243



Westinghouse air conditioning also keeps cafeteria and plant offices comfortable for Champion.



This UNITAIRE® CONDITIONER, like central systems serving labs and offices, is reliable, quiet.

BUSINESS OUTLOOK

BUSINESS WEEK

NOV. 24, 1951



Metal supplies still are completely uncertain for next year.

Allocations for various civilian goods, promised for the first quarter, run all the way from 10% to 60% of base-period use.

However, in the case of steel, the limitation isn't absolute. You're permitted to eke out your supply on conversion deals, theoretically at least.

And present allocations always are subject to review.

•
Tin is in a muddle. Its position, in fact, is even more uncertain than most of the major metals.

A few days ago, talk was about sharp curtailments after the yearend. Stocks were low, imports slack, and the government had withdrawn from the market, subject to concluding new price agreements.

But, over last weekend, talk of deep cuts was officially shelved.

Many in the metal trades figure Washington will have to backtrack in its holdout for lower prices. They think \$1.25 might be a fair price (against the government-set going figure of \$1.03 and \$1.12 offered Bolivia).

•
Hopes for more tin may depend on a deal with Britain. The British want more steel from the U. S. next year; we may tie it to Malayan tin.

•
New plants to increase metal output are assured their metal input. In other words, steel needed to up supplies of steel and aluminum is to be fully available in the months ahead.

And in steel and aluminum lies the real hope of relieving pinches.

•
Supplies of steel-making scrap still aren't large enough to satisfy the mills. But recent gains are at least a help.

The National Production Authority has just asked the industry how it stands. Mills' replies indicate that they have on hand an average of about 45 days' needs compared with a low of 36 days last April.

Of course, if there had not been a gain in that period—the months when weather favors collection—things would have been disastrous.

•
Moving to ease supplies of lead, the government released 30,000 tons from the stockpile this week. It's earmarked for "defense." Copper had been released earlier. And some shipments of aluminum that originally were intended for the stockpile have been diverted to industry.

•
Auto dealers have worked down floor stocks. Yet they still are more worried about being able to sell cars than about getting them.

Estimates prepared by Automotive Daily News indicate cars on hand or in transit now number only 300,000. That's the smallest total since 1948; as recently as last April, the figure was well over 500,000.

Not all of the dip is due to sales effort, of course. Part of it has been caused by the cutback in new car output.

Nevertheless, the figures spell shortages next year.

Meanwhile, even dealers who can sell new cars declare the used car market is dead.

•
Evidence accumulates that one of the sorest spots in consumer goods has pretty well cleared up.

Department store inventories of radios, phonographs, and TV sets

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

NOV. 24, 1951

finally have been worked down approximately to year-ago levels. And even though sales have been dragging until recently, stocks have been only a little more than double monthly turnover.

In fact, the showing on radio-TV is more favorable than furniture and floor coverings generally.

Just how much people overspent last year and early this year on hard goods is only now becoming fully evident.

Spending on soft goods has remained pretty constant. But the second- and third-quarter consumer outlays on hard goods were lower than in any three-month period during 1950.

Estimates by the Council of Economic Advisers put the seasonally adjusted annual rate at \$25½-billion for the third quarter. That's only a shade under the second quarter, but way down from the first quarter's \$31½-billion.

Even before Korea, consumer spending on hard goods was averaging a little better than \$26-billion quarterly.

People still have money to spend. You can see that from the way they take rising supplies of beef off the market at going prices.

Cattle runs to slaughter under federal inspection soared to more than 300,000 in the week ended Nov. 10. They yielded very nearly 160-million lb. of dressed beef—and prices barely wobbled.

Sliding pork prices take none of the edge off demand for beef.

Hog slaughter now is nearing the seasonal peak. In fact, more than 200-million lb. (dressed weight) of pork were turned out in the latest week tabulated. That's the largest in almost a year.

But several factors are running against pork supplies a year from now. First, there's the seldom mentioned fact that farmers sold an unusual number of sows to the meat packers last summer. Next, there's the high price of corn. Finally, there's the drop in pork prices.

Actually, the corn-hog ratio now is less than 10 to 1. That's low enough to discourage the breeding of sows this winter.

Foreigners aren't scrambling for American cotton quite so hard as a year ago.

Exports for the first two months of the cotton season were 524,000 bales this year, against 766,000 in August and September of 1950. At that rate, shipments are under the 5-million-bale-year Washington talks of.

Lower price ceilings loomed for several industries this week.

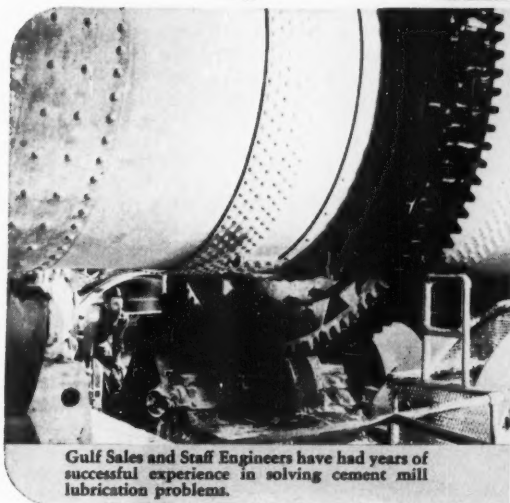
The tire and tube people and the soap makers both were told by OPS of plans to adjust manufacturers' ceilings to retail prices. For soap, the cut is figured at 7% to 9%.

Lower cost of a major soap ingredient, tallow, was cited by OPS.

Some advances in manufacturers' list prices may come along now—not with any idea of making them effective at retail, but to have them on record if OPS tries to clamp down. This already is the case in automobiles; dealers rarely ask the full amount of recent advances.

And it seemed this week to be spreading to major appliances.

C EMENT OR C IGARETTE PAPER



Gulf Sales and Staff Engineers have had years of successful experience in solving cement mill lubrication problems.



Scores of paper mills have adopted Gulf Periodic Consultation Service as a basic step toward lower maintenance costs.

... industry cuts costs through

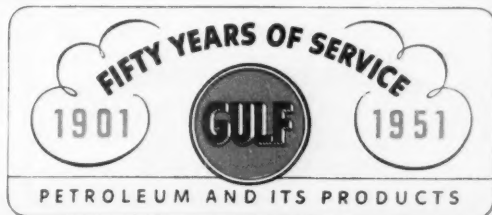
GULF PERIODIC CONSULTATION SERVICE

Gulf sales and staff engineers are welcome visitors as they make periodic service calls to mines, quarries, fleets, railroads, power and industrial plants that use Gulf quality oils and greases.

For through Gulf Periodic Consultation Service they provide effective help on problems involving lubricants, fuels, rust preventives, solvents, waxes, cutting and special process oils. Their recommendations and suggestions nearly always result in lower-cost operation—and that's exactly what they have constantly in mind!

The knowledge and experience of these trained specialists can be applied profitably to your plant

or operation. Write today for a copy of the booklet which explains Gulf Periodic Consultation Service and tells what it will do for you. Gulf Oil Corporation • Gulf Refining Company, 719 Gulf Building, Pittsburgh 30, Pa.



LADISH

Controlled Quality

PIPE FITTINGS

reduce piping
assembly time

Makeup goes smoother . . . with less chance for delay . . . on those piping systems where Ladish fittings are installed. Ladish Controlled Quality makes the difference. By exacting controls over materials and manufacturing processes . . . Controlled Quality assures uniform weldability through metallurgical integrity, fast assembly through dimensional accuracy and provides a real assurance of ultimate operating economy and complete dependability . . . reasons why it pays to specify LADISH.



TO MARK PROGRESS



THE COMPLETE *Controlled Quality* FITTINGS LINE
PRODUCED UNDER ONE ROOF...ONE RESPONSIBILITY

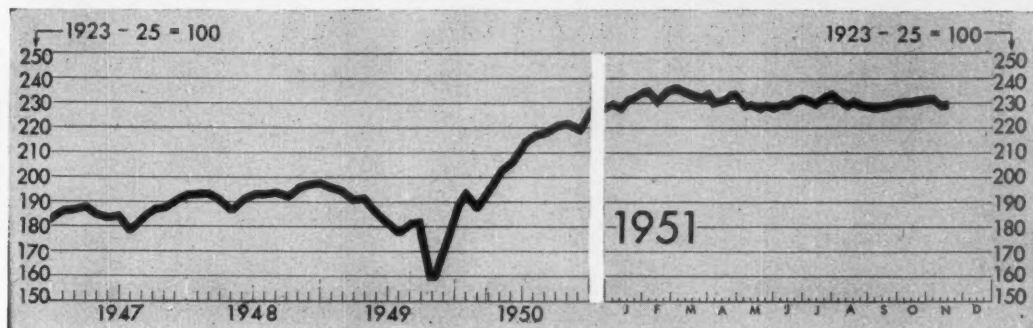
LADISH CO.

CUDAHY, WISCONSIN

MILWAUKEE SUBURB

District Offices: New York • Buffalo • Pittsburgh • Philadelphia • Cleveland • Chicago • St. Paul
St. Louis • Atlanta • Houston • Tulsa • Los Angeles • Havana • Toronto • Mexico City

FIGURES OF THE WEEK



Business Week Index (above)

\$ Latest Week	Preceding Week	Month Ago	Year Ago	1946 Average
230.0	230.1	232.5	220.9	173.1

PRODUCTION

Steel ingot production (thousands of tons).....	2,073	2,021	2,057	1,981	1,281
Production of automobiles and trucks.....	120,026	117,342	120,810	125,970	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$36,758	\$37,887	\$42,791	\$32,683	\$17,083
Electric power output (millions of kilowatt-hours).....	7,333	7,396	7,149	6,728	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	*6,230	+6,204	6,353	5,882	4,751
Bituminous coal production (daily average, thousands of tons).....	1,900	1,877	1,828	1,858	1,745

TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars).....	76	81	82	82	82
Carloadings: all other (daily av., thousands of cars).....	56	59	63	58	53
Department store sales (change from same week of preceding year).....	+6%	+11%	+5%	+7%	+30%
Business failures (Dun and Bradstreet, number).....	109	150	157	170	217

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	458.0	461.3	460.7	485.3	311.9
Industrial raw materials, daily index (U.S. BLS, Aug., 1939 = 100).....	315.9	+316.2	317.2	339.0	198.8
Domestic farm products, daily index (U.S. BLS, Aug., 1939 = 100).....	360.0	362.4	356.8	359.1	274.7
Finished steel composite (Iron Age, lb.).....	4.131¢	4.131¢	4.131¢	3.837¢	2.686¢
Scrap steel composite (Iron Age, ton).....	\$42.00	\$42.00	\$42.00	\$40.75	\$20.27
Copper (electrolytic, Connecticut Valley: lb.).....	24.500¢	24.500¢	24.500¢	24.500¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.54	\$2.51	\$2.47	\$2.21	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	41.83¢	42.31¢	36.78¢	43.49¢	30.56¢
Wool tops (Boston, lb.).....	\$2.40	\$2.40	\$2.30	\$3.35	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's).....	180.8	180.6	183.6	158.2	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.55%	3.55%	3.52%	3.21%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	24%	24%	24-24%	14-14%	4-1%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	N.A.	52,162	51,323	49,257	+145,210
Total loans and investments, reporting member banks.....	N.A.	72,340	71,508	69,414	+171,147
Commercial and agricultural loans, reporting member banks.....	N.A.	20,667	20,489	16,919	+19,221
U. S. gov't and guaranteed obligations held, reporting member banks.....	N.A.	31,596	30,976	33,349	+149,200
Total federal reserve credit outstanding.....	24,602	24,595	25,117	20,171	23,883

MONTHLY FIGURES OF THE WEEK

MONTHLY FIGURES OF THE WEEK		Latest Month	Preceding Month	Year Ago	1946 Average
Average weekly earnings in manufacturing.....	October.....	\$65.17	\$65.45	\$61.99	\$43.82
Retail sales (seasonally adjusted, in millions).....	October.....	\$12,485	\$12,292	\$12,032	\$8,541

*Preliminary, week ended Nov. 17.

††Estimate (BW—Jul. 12 '47, p. 16).

N.A. Not available at press time.

‡ Date for "Latest Week" on each series on request

† Revised.



EYES THAT SEE IN THE DARK

They're clear-seeing eyes . . . eyes that penetrate fog and darkness, help guide airplanes safely through thick weather and the blackest nights. Back of the electrical equipment that gives them power are dependable storage batteries. Exide Batteries are used by all leading air-transport companies in America.

Where dependability is vital, you'll find Exide Batteries.

They provide motive power for

battery-electric industrial trucks and mine haulage units. In railroad service, they supply power for lighting and air-conditioning passenger cars, cranking

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"Exide" Reg. Trade-mark U. S. Pat. Off.

Diesel locomotives, powering signal systems.

Many thousands of Exide Batteries are used by telephone and telegraph companies, radio and television stations, electric light and power plants, steamship lines. They are used for emergency lighting, fire alarm systems, numerous other applications. And on millions of cars, trucks, tractors and buses, they daily prove that "When it's an Exide, you START."

1888 . . . DEPENDABLE BATTERIES FOR 63 YEARS . . . 1951

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 2 • Exide Batteries of Canada, Limited, Toronto

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
NOV. 24, 1951

A
BUSINESS
WEEK

SERVICE

Wage-price leapfrogging is about to start again. It will push your business and living costs even higher.

Truman knows this can't be avoided. He talks against more inflation. But putting the talk into practice would mean standing up to the big unions and banning new pay raises. And there's no political stomach for that in the White House.

So you are in for some more "controlled" inflation. It's different than in 1950. Then the fifth round of wages and prices came before there was any government control. But the upcoming sixth round must be government-approved, start to finish. Neither wages nor prices can rise without Washington sanction.

Steel will set the pattern (page 34). And steel is basic. Other industries follow it on wages and prices. And this time it's out in front on sixth-round negotiations.

Circle Jan. 1 on your calendar. The steel settlement is due then, which means 1952's wage-price prospects may come with the New Year.

Washington will approve a steel pay raise. There's no doubt about that. For weeks the wage controllers have been figuring how to stretch the wage formula to satisfy Murray, head of the CIO steelworkers.

A boost of at least 15¢ an hour in labor costs is certain. That's a sort of minimum. The wage bosses say they can O.K. this without abandoning stabilization. And if Murray insists, they can go to 20¢ and claim wage stabilization has survived (BW-Nov.17'51,p16). The word is out that a steel strike must be prevented.

A steel price hike will be approved, too. For wage increases will be too big to be absorbed out of profits. Since the last steel wage increase in January, steel making costs have climbed steadily. So higher wages can't be paid without higher prices.

A \$7-to-\$10 steel price boost is probable. The industry is acting tough. President Fairless of U.S. Steel has indicated that the industry can't work things out under controls. This sounds like 1946. Then the industry took a strike until the government worked out a wage and price increase. Then, as now, both wages and prices were subject to government control.

Other unions and industries will follow steel on wages and prices. On the wage side, union politics will force labor leaders to demand what Murray gets, as a minimum. On the price side, the cost of steel and things made of steel will affect just about everything. So, once you get a settlement of steel wages and prices, you will have the magnitude of the new "controlled" inflation, although it will take months for it to work through.

The big brake on prices is consumer resistance. But rises can and will be passed along on thousands of things made of metal. That's the area in which civilians compete most with the armed forces. Rises may be slower in coming on soft goods. But it's good history that sooner or later cost increases must be reflected in prices.

Changes in top stabilization personnel are coming. It's no shakeup, only the result of long-made retirement plans.

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
NOV. 24, 1951

Chief stabilizer Johnston, who set the "soft" wage policy, will go next week. He would like a try at West Coast politics.

Prices boss DiSalle plans to leave, too. There's pressure on him to stay, but he's anxious to get back to politics in Ohio.

Wilson will take a bigger hand in wage-price policy, and you may get a real hold-the-line effort, once the sixth round is over.

•
Jet engines are a big threat to future auto production. Plans now are to let the auto companies produce cars at 60% of their 1950 base through the first and second quarters of 1952. But this is tentative.

The problem is tools. That bottleneck to big-scale plane production hasn't been broken. The auto industry has many tools that could be used, and they're being eyed by both the Air Force and the makers of airplanes.

Mobilizer Wilson is making a survey. Plane production is critical. If Wilson concludes that jet engine demand is such that it can't wait for all the new tools, he will raid the auto makers, which would mean a slash in car output.

•
The armed services are finicky buyers. They want all the latest—automatic transmissions on trucks, the last word in plane electronics. This slows production. Factory lines often are ordered shut down while "latest improvements" are brought in. The result is production delays.

Wilson is moving in. The service complaints of off-schedule output are annoying him. So he's telling the military: If you want weapons in large numbers and fast, then freeze specifications and let the lines run for more than a few days at a time. The military is giving in, and the result will show soon in plane, tank, and electronic output figures.

•
New small business aids are about to hatch, both at the National Production Authority and the new Small Defense Plants Corp.

Assistance "clinics" will be held by NPA in some 20 key cities. Small metal users who got business-busting cutbacks in first-quarter allotments will be invited. The aim is to help them get arms subcontracts.

SDPC is about to launch its loan program, using a \$100-million fund. If you're interested, keep in touch with your nearest RFC field office.

Handling of defense contracts by SDPC will be delayed indefinitely. The agency has authority under the law to take prime contracts for arms and then subcontract them out to small producers. But it plans to try to steer more orders to "smalls" before going into business itself.

Who qualifies as small business? You can get some guidance from a new publication by the Commerce Dept. Copies may be obtained from Commerce Dept. field offices or by writing the Commerce Dept., Washington 25, D. C. Ask for the "Classification of Small Manufacturers in 452 Industries." The per-copy price is 10¢.

•
Spending will stay on the rise through fiscal 1953 (the 12 months starting next July 1) and probably through the following year (page 19). Defense ordering will taper down in 1953. But it will be a year or two before this will bring down the actual level of spending.

Truman will ask new taxes in January. But Congress will try to delay until after the elections are out of the way next November.



How to Handle Perishables? The Dairy People Agree 100%

THE handling and processing of milk and milk products is one of the nation's major industries—and a mighty delicate, painstaking business, too! But, if dairymen have never-ending problems of protecting flavor and purity, and of keeping maintenance and cleaning costs down, they also have a never-failing helper. It's Allegheny Metal.

For many years now, practically every item of equipment that has gone into a milk-processing plant has been made of stainless steel. From the receiving tanks to the bottle or package, and from one end of the country to the other, milk products today seldom come in contact with anything but stainless. As good businessmen, dairymen have found that nothing else can do the job as well. No other commercial metal is at once as strong, as corrosion resistant, as easy to clean and keep clean, and as lifetime-lasting in service.

The dairy and food industries, of course, class as essential uses for Allegheny Metal. There are many others: in the processing of chemicals,

drugs and petroleum products, for example—and in planes, ships and many other vital items of defense equipment. Naturally, some less essential uses have to give way, but there are ways to spread the supply of stainless steel farther.

For one, we're continuing our many-million-dollar program of expanding production. For others, we offer every assistance to fabricators to make more efficient use of stainless steel, and to find alternate grades which will use less of the critical alloying materials. *Let us work with you!*

Complete technical and fabricating data—engineering help, too—are yours for the asking from Allegheny Ludlum, the nation's leading producer of stainless steel in all forms. Branch Offices are located in principal cities, coast to coast, and Warehouse Stocks of Allegheny Stainless Steel are carried by all Joseph T. Ryerson & Son, Inc. plants. • Address Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Penna.

WEC 3774


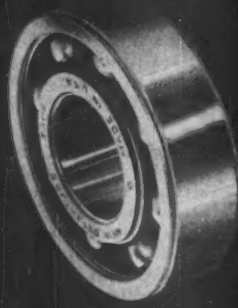
You can make it **BETTER** with
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Creative Engineering at your service

More than forty years of research
and its practical application
have provided New Departure engineers
with a vast fund
of technical know-how
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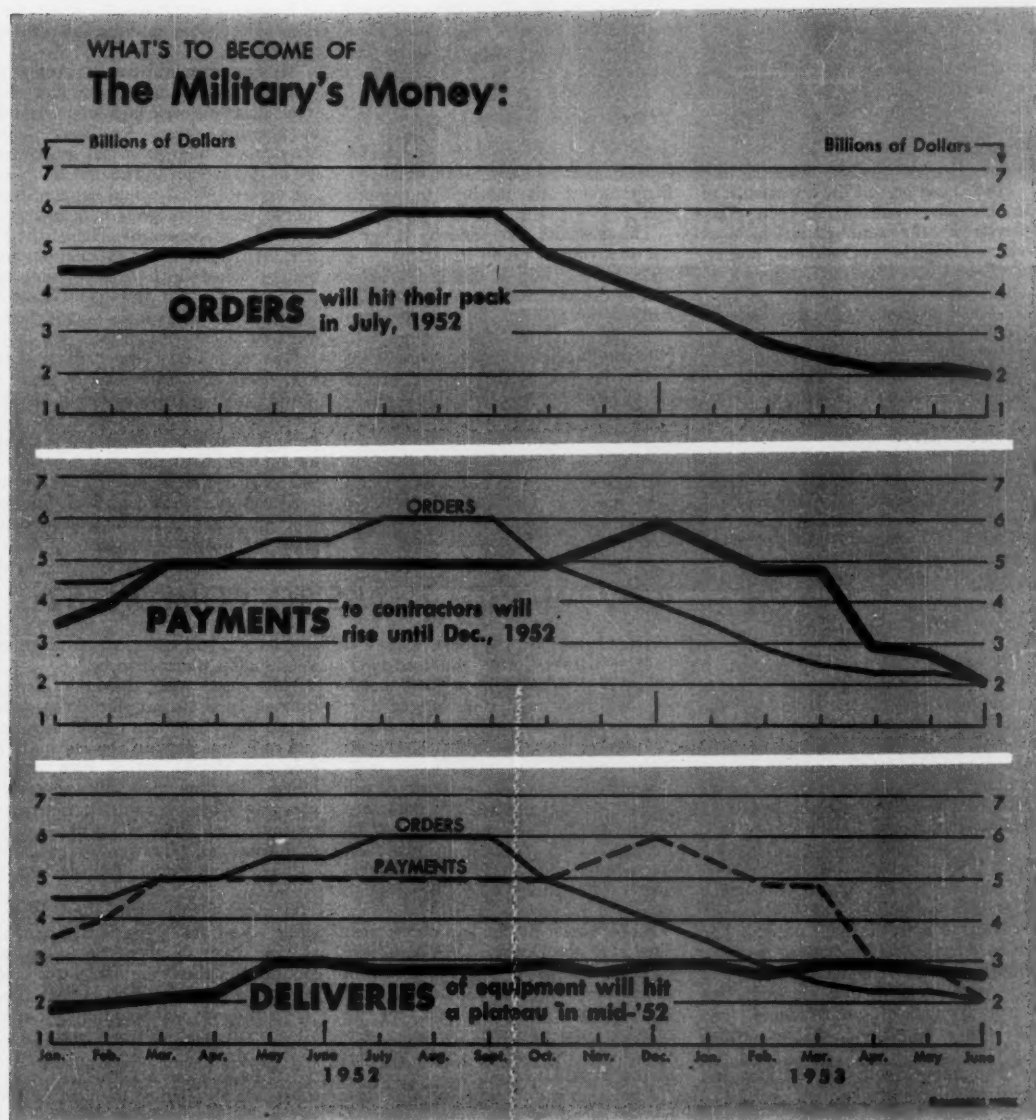


Nothing Rolls Like a Ball...

NEW DEPARTURE BALL BEARINGS



NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONNECTICUT



This Is the Story On Arms Output:

ONE WAY of looking at it, things are in unbelievably bad shape. Everyone says production of arms is behind schedule.

There is a real arms lag. But it's not so bad as you can make it look by comparing it with schedules that never meant anything in the first place—since Korea all kinds of schedules have

been scaled down or scaled up. The lag is understandable in some cases; inexcusable in others. It's understandable that the Pentagon continues to hold out for the best arms possible. This is luxury, certainly, but short of war it would be easy enough to make a good case for it.

It is inexcusable—from the standpoint of the mobilizers—that the tools and materials are not available for making arms everybody agrees should be made. And here is where the biggest bottleneck is: in machine tools, in electronic gear.

Also, a big part of the appearance of trouble arises out of the mere complexity of the time cycles involved when Congress appropriates money, the Pentagon awards contracts, and industry produces munitions.

• **Three Figures**—Take this month. The rate of letting contracts is healthy: slightly over \$4-billion. Spending is about half that (many contractors get paid while work is in progress). But deliveries of finished items total a sluggish \$1.5-billion.

At this rate of lag, total deliveries of munitions by next June 30 will fall about \$6-billion behind mobilizer Wilson's schedule. And unless production shifts into a higher gear, you can double that figure to measure the lag a year after that.

Output Up, Cost Down

If arming goes into higher gear, it will have to do it in producing, not in spending. Actually, the armed services will ask Congress next January for about \$6-billion less than the sum Congress voted for 1951-1952. The military budget request for 1952-1953 will be around \$52-billion, plus another \$6-billion in arms aid.

Stack that up against the \$56.9-billion in appropriations and \$7.5-billion in arms aid for the current year, and it looks like a cutback. But it isn't. Not in terms of what's actually needed. The brass doesn't feel that we're over the hump, and it doesn't feel that the need has lessened. Nor does the reduction come because of any Pentagon fears of what's happening to the civilian economy.

The budget will call for less cash next year only because:

• The long lead-time for such complex weapons as planes, tanks, and ships has been largely financed by previous appropriations. Costs of tooling and getting into production have already been paid. For the next round of contracts the Defense Dept. has to line up funds for only 12 to 18 months, rather than two or three years.

• The flow of contracts out of Washington will begin to thin down toward the end of next year (chart,

page 19). So over-all appropriations can be tapered.

• **Bottlenecks** still impede deliveries. The Pentagon has resigned itself to not breaking enough of these bottlenecks to matter. It won't get so many deliveries, so it won't need so much money. The brass is still hoping for a miracle, but isn't hanging a dollar sign on it.

Why the Delivery Lag?

There are almost as many reasons for lags as there are items to be delivered. Biggest cause: the machine tool shortage.

The machine tool industry is up a tree in trying to fill all its orders. The Air Force took a step toward full utilization of existing tools when it threw its reserve pool of machines open for loan to contractors (BW—Oct. 13 '51, p153). Now the Navy is following suit. That leaves the Army yet to move toward clearing out its machine tool reserves.

• **Only the Best**—Another major cause for delivery lags is the result of time-honored military practice: insisting on having the very best, with all the latest improvements. Sometimes this calls for more tooling; at best, it means a change along the assembly line.

II. FLOW SHEET: PEAKS TO COME IN '52

The chart (page 19) shows what will happen between now and mid-1953. Ordering (letting contracts) and spending both will rise. But the big gain will be in deliveries, which should double by next May, then level off high.

By February, 1953, spending will begin to exceed value of new contracts. Contract-letting will be dropping off by then. That's according to plan. At some time during mobilization, emphasis has to swing from the future to current production of goods.

• **Since Korea**—By the end of the next fiscal year, the Defense Dept. will have spent a total of \$119-billion to rearm since Korea. And the military will have been allotted \$176.5-billion for all costs: salaries, contracts, operating, getting production under way for the three-year buildup.

The difference between the two figures—spendings and appropriations—represents contracts involving long lead-time and funds for which contracts haven't yet been let.

The difference between the two also represents a lot of undelivered, partly finished munitions. In that sense, it puts a price tag on delivery lag.

• **How Much, How Fast**—Right now, delivery of new weapons is running at a dollar value of \$1.5-billion a month. That's a big jump from six months

Some writers of military specifications, for instance, are insisting on automatic shifts and power steering for military trucks. Then, too, the U.S. builds a jet engine to last far longer than our allies do—plus building three or four replacement engines at the same time. The British consider this a wasteful practice.

Military specifications are being so spattered with refinements, in fact, that some items are well nigh unproducible in quantity. Even Air Force chief Vandenberg admits several jet planes are in this category. Thought troubling the experts: What would happen if we should need these items in a hurry.

• **Need a Scorecard**—Then there's scheduling. So many production and buildup schedules have been hung on the wall that you just about need a scorecard to tell which one is being followed at any given time.

One example of the conflict: Last week Gen. Olmstead made a pitch at showing that arms deliveries to NATO countries are right on schedule. But he neglected to mention that the schedule he was talking about was based on rate of deliveries already made, not on what was wanted. A neat trick, but one that Sen. Lyndon Johnson branded intentional misrepresentation.

ago, but it's still a long way from where Washington wants it to be.

Next year, with deliveries coming through twice as fast, the dollar value should hit \$3-billion a month in spring and early summer. In the fall of 1953 deliveries should get as high as \$4-billion. By then they will well exceed spending. That's possible because many contracts are financed with progress payments, and advances for expensive tooling, even before full delivery is taken.

Contract-letting will climb for a while. Next fall obligations should be at their peak of about \$6-billion per month. But they should begin to taper off by the end of 1952. At that time:

• Industry will be reaching a saturation point as far as new contracting is concerned.

• Barring further buildup plans, we should be reaching the peak of military production anyway. Lead-time on any contracts let next year would extend beyond the scheduled buildup peak into a period of lower munitions production.

Another thing: Procurement officers are going to have to slow down on contract-letting, just as they did in World War II, to avoid flooding industry and overstraining the supply of materials.

That very thing happened in 1944, and the military had to cancel muni-

tions contracts in wholesale lots. They found they simply couldn't get performance on contracts. The Pentagon wants to avoid a repeat performance.

• **Merrily Along**—So the buildup continues. You can see its outlines in the annual spending estimates: about \$20-billion in the fiscal year ended last June, \$44-billion this fiscal year, about \$55-billion in the fiscal year to come.

Of the new military budget for 1952-53, about \$22-billion will be for major procurement and production costs. It breaks down this way: aircraft, a bit more than \$10-billion; shipbuilding, slightly over \$1-billion; tanks, guided missiles, electronics, and other items, a little more than \$10-billion.

Military construction requests add up to about \$3.3-billion. This will go primarily to finance the building of new airbases. Also included will be the cost of finishing touches on North America's radar warning net.

Jasper Soon to Yield High-Grade Iron Ore

Two major companies have developed a satisfactory process for the extraction of high-grade iron ore from the vast deposits of hematitic jasper that lie in Michigan and Minnesota.

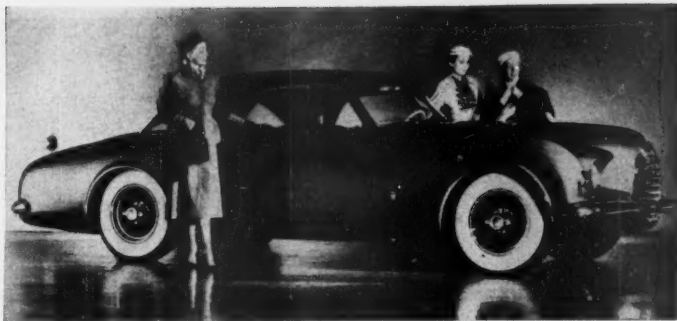
This is the big meaning behind the news that Ford Motor Co. and Cleveland Cliffs Iron Co. have jointly formed a yet-unnamed company for the exploitation of crude jasper. Cleveland Cliffs will manage the setup, which will be located near Humboldt, Mich.

• **Two Units**—First plans call for building a 200,000-ton-a-year concentration plant to be in operation by late 1953. A second similar unit is scheduled for operation in 1955. At first Ford—which operates its own steel works—will take the entire output concentrate, for producing an enriched sinter in its sintering plant. Cost of the concentrate will run around \$15 a ton.

Later it is planned to build an agglomeration plant for pelletizing the concentrate for use in blast furnaces and open hearths. When the operation reaches full scale, Ford will not take the whole output.

Cleveland Cliffs men won't say how their process works, though they admit that it involves flotation.

• **Nonmagnetic**—With the open-pit ores of the Mesabi Range running thin, iron men put great importance to the beneficiation of low-grade ores. Successful methods have been developed for beneficiation of taconite ore, which is magnetic. Importance of the new method lies in that it brings the non-magnetic jasper into the iron ore picture. Hematitic jasper is found in much greater quantities than taconite.



Chrysler Has Latest Deal for ...



... European Bodies by Ghia

Carrozzeria Ghia is an Italian company that specializes in building jazzy Continental-style auto bodies to go with the chassis of other manufacturers. It has made bodies for such chassis as the Alfa Romeo (middle picture, above) and the Plymouth (lower picture). Now it has turned out a special model for Chrysler Corp. (top).

The Chrysler model, a super-luxury job called the "K-310," is still in experimental stages (BW—Nov. 17 '51, p. 21). Chrysler hasn't made up its mind whether to produce it or not. People who have seen it are enthusiastic, but, as Ghia says, "Will this enthusiasm

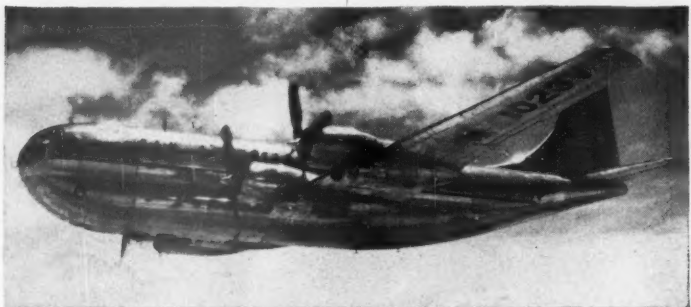
last when they know the price?" Mass-produced in Italy by Ghia, the K-310 would cost \$15,000—though Chrysler could turn it out in the U.S. for less.

The car takes a conventional Chrysler 180-hp. engine, but Chrysler has developed a new powerplant of 310 hp. that will also fit the chassis. The 310-hp. motor runs on ordinary premium gas.

Ghia is working on four other bodies for Chrysler besides the K-310, but they are top-secret stuff. Asked for photos, an executive at Ghia expostulated, "If you were my brother, and you gave me \$15,000, I would not give them to you."



1936: \$400 bought you a one-way float between the United States and Germany in the German zeppelin Hindenburg. Transatlantic flights were strictly for the rich.



1951: \$395 one-way is still out of the question for the average vacationer. Pan Am's recipe for mass travel to Europe: transatlantic air coach service.



1952? TWA chairman Pierson thinks round-trip fare should be \$477.

"What's Minimum Air Rate to Europe?"

Two-week vacations in Europe, at a price the average American vacationer can afford, are almost certain to become a reality next spring—mostly because Juan Trippe, president of Pan American World Airways, has always thought that it's good business.

Next Tuesday representatives of all the scheduled transatlantic airlines, both U.S. and foreign-flag, will meet in Nice, France. They'll discuss the establishment of transatlantic air coach flights—flights, that is, with half again as many passengers per plane, with no frilly full-course meals and superservice, and, most important, with a fare much lower than is now being charged for first-class flights.

• **Old Issue**—These airlines, all members of the International Air Transport Assn., have discussed the subject often before. And each time, they have turned it down, usually with but one dissenting vote—Pan Am's. This time they won't turn it down. For that change of heart, there are two principal reasons: (1) Pan Am's threat to pull out of IATA and go it alone with a coach service; and (2) the success of

air coach operations within the United States by scheduled U.S. carriers—for which Pan Am is also partly responsible, even though it doesn't fly a single domestic route.

• **Up . . . and Up**—Transatlantic air fares have been rising steadily ever since the end of World War II. Back in 1936 and 1937, it cost \$400 to fly one way between the U.S. and Germany on the dirigible Hindenburg. In 1939, when Pan Am and the British started fly-boat service between New York and Southampton, the one-way fare was \$375. During the war, the fare varied considerably, but most of the time it was \$572 (N. Y.-Lisbon). After the war it went down again to \$375, and when land-plane service between New York and London was first introduced, late in 1945, it stayed at that level.

In December, 1945, Pan Am dropped the fare to \$275, and the British government retaliated by restricting Pan Am's landing privileges to two a week. After a month, Pan Am gave up and went back to \$375. But it continued to offer service from New York to Shannon for \$249, and that put the

pressure on the British. Finally, British Overseas Airways Corp. agreed to drop the N. Y.-London fare to \$325 if Pan Am would discontinue its cut-rate fare to Shannon. Pan Am agreed in November, 1946.

Since then, every change has been up—to \$350 in June, 1948; \$375 in November, 1950; and \$395 this past Oct. 1.

• **How Much Lower?**—The new coach fare will be a lot lower than that. The big question at Nice next week will be: What fare will be low enough to attract the mass market, and still be high enough to give the airline some profit? Pan Am says \$405 round trip would be just right (that's \$225 one way, with a 10% round-trip discount). It says \$450 round trip (\$250 one way, less 10%) is the absolute maximum that would be within the vacation-savings limit of the average American.

But it looks as if Pan Am will be overruled again. Its three major competitors—TWA, BOAC, and Air France—all propose a round-trip fare of \$477 (\$265 one way, less 10%). And the U.S. Civil Aeronautics Board has also



PAN AM'S president Juan Trippe says that's still too high. He's plugging for \$405.

come out in favor of that figure.

CAB and TWA have gone one step further toward a low fare, however. They want the \$477 figure to apply only in the summer tourist season; for the off-season they propose a 25% discount from the one-way fare, which would bring the round trip down to \$397.50.

Pan Am agrees that the off-season fare should be lower. But it will continue to fight at Nice for an on-season fare between \$405 and \$450. Nevertheless, the \$477 proposal is likely to win out, at least for now. Starting date for the service will probably be set at Apr. 1, 1952, although Air France will argue for a postponement to July 1.

• **No Threat to First Class**—One big problem is that most of the lines are short of planes to carry even their present load. Under the present one-fare structure, the only way the airlines can compete is to offer more and more service: hack out seats to give more leg room; convert to "sleeperettes," which carry one-third fewer passengers; give seven-course meals, complete with cocktails, wine, and liqueurs. And more and more luxury can lead only to higher and higher costs and fares, and thus to less and less business.

Even if air coach cuts into first-class

volume temporarily because of shortage of planes, over-all profit margin won't be cut—more people per plane will yield as good revenue per flight at the lower fares. And for the long term, lowering the price and increasing the volume is obviously a healthy trend.

That has been Pan Am's position since the start. But all the other lines, and CAB, were dead set against it for a long time. The thing that finally convinced them that Pan Am may be right is the big success that the domestic lines have had with air coach, with no ill effect on first-class travel.

• **Postwar**—Air coach development began immediately after the war, when U.S. military pilots and mechanics came home, bought or leased planes, and went into business. They had no schedules, flew whenever they could get

a plane load, loaded a lot more people into each plane, and charged lower fares than the scheduled lines.

Pan Am was the first scheduled line to go along; it started coach service between New York and Puerto Rico in 1948. The experiment was a big success. So, a couple of months later, Capital Airlines asked CAB for permission to try air coach at night, using planes that would otherwise be left idle after the evening rush hour. CAB agreed. Within a year Capital's "Night Hawk" flights were carrying thousands of passengers, most of whom said they couldn't have afforded to fly otherwise.

The other big carriers soon applied to CAB for their own coach routes. United was a holdout for a long time, but even United was forced to coaches by the pressure of competition.

Latest Item in Sears Catalog: A Car

Deal between Kaiser-Frazer and Sears, Roebuck will put a new car, the "Allstate," on the market before Christmas.

Sears, Roebuck & Co. this week confirmed long-standing rumors that it was planning to market a low-priced automobile through its retail stores. The company announced that it will begin limited selling of a new car to be called the "Allstate" in 17 southern and southwestern cities before Christmas. The car will be manufactured for Sears by Kaiser-Frazer Corp.

More specific details as to the date when the car will be introduced, its price, and its appearance will be announced by Sears in a few weeks. However, it's safe to say that the Sears car will resemble the Henry J. and will sell in the Henry J. price range. Kaiser-Frazer has told dealers Sears will have no price advantage.

The car won't be put out in large quantities at first. The present arrangement is more or less a trial run.

• **Old Egg**—This deal has been hatching since as far back as 1948, when Sears first began discussing it with Kaiser-Frazer. And it's said that Sears had sounded out other companies on the idea even before that. But the talks always broke down under the problems of (1) service, and (2) trade-ins. Obviously, Sears could not service the cars itself—except to a limited extent. And, not being a full-fledged automobile distributor, it would have the problem of what cars to accept as trade-ins, or whether to accept any at all—and, if it did accept any, just what to do with them.

Under the Sears-Kaiser agreement, at least the first of these worries seems to be taken care of. The Allstates will probably be serviced in Kaiser-Frazer dealer garages. Kaiser-Frazer has close

to 3,000 dealers today, so it would seem that there will be adequate facilities throughout the country for this purpose. As far as small service jobs are concerned—battery and tire work, for instance—Sears already has facilities of its own to handle this minor type of maintenance.

As for the second problem—trade-ins—Sears has not yet said what it proposes to do.

• **Who Gets What**—Both Sears and Kaiser-Frazer regard the venture as a sound one. From Sears' point of view, says Ted V. Houser, vice-president in charge of merchandising, it is a logical development of an automotive merchandising program that Sears has been carrying on for some time. The company already has stores that are doing a big business in batteries, tires, and auto accessories—many of them under the "Allstate" brand. So when it starts selling the cars, a lot of the sales, display, and service facilities will already be in existence. And the name "Allstate" will find a good part of its spawework done, too.

From Kaiser-Frazer's standpoint, the arrangement will be a good thing for the corporation itself and, K-F says, for its dealers. The corporation will benefit, naturally, from the opening up of a new outlet for its manufacturing. The dealers will benefit from the new business they get in servicing the Allstate cars. And Edgar F. Kaiser, president of the corporation, says that the new agreement with Sears will in no way change Kaiser-Frazer's methods of marketing the Kaiser and Henry J. cars through its regular dealers and distributors.



GIMBELS thinks Mars is the place to do its selling. The interplanetary travelers board the space ship *Polaris*, which makes the trip in 80 seconds. At Gimbels it's strictly a jet-propelled Christmas, while just across the street . . .

Christmas Displays Offer Choice of Dream Worlds

When department stores plan their Christmas displays, they always go on the assumption that children live in a world of their own. The trouble is nobody seems to know where that world is.

This winter New York's traditional department store rivals came out about 500 years apart in their Christmas



CURIOSITY gets the best of an intrepid mother. She'll go along—to watch Junior.



ALL ABOARD: Up goes ramp. *Polaris* is ready to blast-off from Terra Spaceport.



THROUGH VIEWPORT youngsters watch Manhattan disappear, Mars loom up.



MACY'S makes its Christmas toy pitch in the world of Mother Goose. It features the animals that figure in the rhymes. But as a hedge there's a display for the gun-totin' set and a super-realistic electric train.

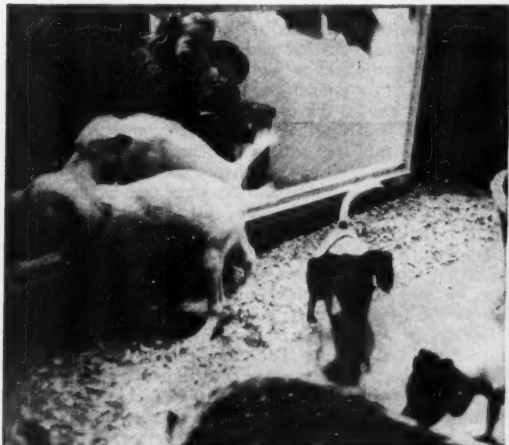
pitch. Gimbel's is 100 years or so into the future. Macy's is back in the 16th Century.

Macy, betting that the kids are the same old kids, is using an "old faithful" to draw the crowd. Biggest attraction is a Mother Goose zoo, complete with honest-to-goodness live animals—even the "calf" that jumped

over the moon (a cow was too big for the allotted space). Another attention getter is the super-realistic electric train setup. And for the gun-totin' set there's a snappy repeating rifle that will shoot 4,000 shots without reloading.

Gimbel's has its money on science-fiction-fed kids. Its big magnet is the Tom Corbett Space Ship "Polaris."

After a personal chat with Santa and a look-see at his reindeer, the kids are scooted down a flight of stairs to the Terra Spaceport for a simulated 80-second trip to Mars. Through a viewport (window) a panoramic view of the trip flashes by. For those who can grasp the scientific details, Tom Corbett describes the instrument panel.



REAL LIVE PUPPIES require no imagination on the children's part. They prove a big hit with the little New Yorkers.



OLD FRIEND or not, one tiny tot is reluctant to chat with Mother Goose. She'll take hers in the pages of a book.

Stockpilers Have a New Approach

The stockpile is no longer an inviolate supply for war needs only. Stockpilers are dipping in now and then to keep both civilian and military industry going.

Buying policies are adjusted to manipulating the market price, as in the case of tin.

Over-all, performance isn't too bad. We're hitting about half this year's goal; at the start of 1950 we ran around one-third of a much lower quota.

When the U.S. began building a stockpile of strategic materials after World War II, the precedent-breaking program was geared to these two rules:

(1) Stockpile supplies would be used only as a last-ditch necessity in an all-out war; and

(2) Stockpile buying would not be used to manipulate the market price of any material on the list.

• **Observed in Breach**—These rules lasted only as long as stockpile buying was inconsequential and supplies on hand were small. Now, without any fanfare, stockpile policy is being radically changed.

Today the mobilizers keep their sharpest eye on the price impact of their stockpile buying, and they tap the stockpile to keep the civilian economy going during this short-of-war period.

• This week, for instance, National Production Authority officials are after a supply of lead from the stockpile. They need it to make good on Controlled Materials Plan allocations. Part of the reason for the situation: Official policy on prices prevented U.S. lead consumers from paying world market prices, thus cutting imports. Already, lead production earmarked for the stockpile has been diverted to industrial use.

• There are plans afoot to cut back on civilian use of tin as a result of dwindling supplies. Reduced U.S. supply is the result of a deadlock between Bolivia and the U.S. over prices. Unlike the situation in rubber, where synthetics gave the U.S. the whip in setting raw prices, the government hasn't been so successful in tin. RFC boss Stuart Symington and GSA boss Jess Larson had figured that inventories available at smelters were sufficient to pull the same squeeze on the Bolivian traders. Now they aren't so sure.

• Supplies of aluminum destined for the stockpile have been diverted to industry.

• As a result of the copper strike, copper was withdrawn from the stockpile itself to keep industry-military

and civilian—turning at present rates.

What these examples reveal is this: The \$4-billion stockpile of critical materials, and a weekly buying program averaging upwards of \$40-million, have an economic impact that just can't be isolated from either current production or current pricing.

• **Upward Shift**—Back in 1946 stockpiling was almost solely the concern of the Munitions Board. It fixed stockpile targets that held good until Korea. At that time stockpile goals were raised 70%. At the beginning of 1950 stocks on hand were about one-third of the then-existing goal—just under \$5-billion worth. As of the end of this year, officials report that one-half the dollar value of a higher goal—\$8.3-billion—will have been reached.

Now stockpiling is part of the overall mobilization command topped by Charles E. Wilson, chief of the Office of Defense Mobilization.

• **Public Secret**—Stockpiling operations have been shrouded in secrecy, and officials discuss the stockpile publicly only in terms of the total figures.

Actually, the size of the stockpile of any key material, such as rubber or copper, is obtainable by almost anyone who wants to find out. He just has to refer to approved government statistics. Various government agencies publish supply figures—U.S. production and imports—and figures are also available on U.S. consumption. The difference, over a period of time: purchases for the stockpile.

Many mobilization officials have urged more publicity about our stockpile position. They argue: Nothing is really being kept secret from the Russians. Only the public is kept in the dark, and this breeds suspicion and lack of understanding of what's going on.

As a matter of fact, one official noted that a newly hired government technician, who had not been cleared for access to the official stockpile figures, came up with his own estimate on several key items—estimates that turned

out to be accurate within about 2%.

• **Danger of Leaks**—All officials emphasize, however, that future buying plans have to be kept under wraps. Otherwise, speculators and suppliers hold out for prices higher than they would otherwise ask.

There's one exception to all this: Congress is given full and detailed information. From time to time, a congressman has spilled the whole story on a particular commodity when it suited his purpose to do so.

• **Shifting Target**—As of July this year, there were 73 materials on the Munitions Board's list of "strategic" materials, ranging from aluminum and antimony through wool and zinc. The lesser priority list of "critical" materials included 20 items, beginning with agar and ending with zirconium ore.

Some stockpile targets have been reached. Pepper, for instance, is off the list entirely. And it's reported that the stockpile is within 90% of the target for nine strategic items.

One other factor makes evaluation of the stockpile program difficult. The rating of the individual commodities changes month by month. For example, the post-Korea updating of the stockpile program increased targets for all but 10 materials, and three materials were added to the program—but three were dropped.

More Pork, Less Price With Phony Sow's Milk

Lots more pigs and lots lower prices. That's what Chas. Pfizer & Co. hopes will result from its new synthetic sow's milk, called Terralac. The big pharmaceutical company thinks Terralac may add as many as 25-million hogs to the annual slaughter in the U.S.

Pfizer says that with its product it is possible to take baby pigs from the sow within 48 hours after birth. That means less chance of the piglets' being crushed and lots more certain food supplies for large litters. Also, it means that the piglets will be getting terramycin in their milk, thus having their growth speeded and their disease-resistance boosted.

Pfizer sees the antibiotic, terramycin, as the biggest feature of the new food deal. The drug's biggest pig-speedup comes when the future bacon is very young. Trouble was, though, that, until Terralac came along, you couldn't get the drug into piggy at the time it would do the most good. Now they can take it right in the cradle, in a tasty mixture.



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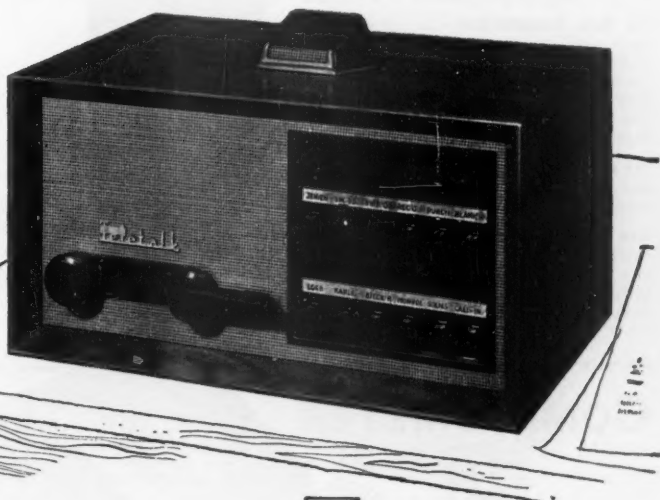


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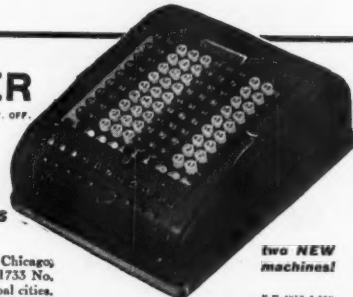
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BUSINESS BRIEFS

Investment bankers will convene in Florida next week freed from the shadow of a government antitrust suit. The Investment Bankers Assn. of America, with more than 700 members, was excused as a defendant in federal court in New York. Judge Harold R. Medina continues hearing the monopoly charges against 17 banking firms.

Corporations paid \$1.13-billion dividends in September—2% below the same month in 1950 (BW—Nov. 17 '51, p144).

Pennsylvania R.R. offered to take back the Long Island R.R., its bankrupt subsidiary (BW—Sep. 15 '51, p152), now being run under federal court supervision. The Pennsy would shift fare-fixing from the state Public Service Commission to ICC.

Levittown, L. I., stopped growing this week when the 17,447th house was turned over to its new owner. Levitt & Sons, Inc., will now concentrate on a 16,000-home project in Bucks County, Pa., for workers at U. S. Steel's new Fairless Works (BW—Aug. 25 '51, p28).

Ford Motor Co. gave the public its annual peek at the books when it filed a financial report with the Massachusetts tax commissioner. It showed: (1) The privately owned company's surplus and reserves increased \$181½-million during 1950; (2) the ratio of assets to current liabilities was about 3.5 to 1, compared with 2.8 to 1 for the previous year.

Corporation income taxes levied by two cities, Youngstown and Campbell, Ohio, were ruled unconstitutional by the District Court of Appeals in Toledo. The court continued a permanent injunction against the city taxes (page 146).

Economic Note: Horse players put more than \$3-million through the "tote" windows on three days of the last week of New York City's racing season. Handle at all the city's tracks for the entire season came to a record \$345-million—12% over 1950 and 3.4% ahead of 1949.

Studebaker Corp. opened its new \$4-million assembly plant near New Brunswick, N. J., this week and dedicated it to making parts for J-47 turbojet engines. But it couldn't show the visitors any production. Machine tool shortages will hold up production for several months, with only half the necessary tools now in the plant.

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LABOR



AFL SPOKESMEN Harry Bates, W. C. Birthright, and Elmer Walker press drive in WSB for a general wage increase.

They All Want Productivity Pay Boosts

Industry is ready to go along, where production increases can be shown. But labor wants no strings at all.

Ever since it approved the 4¢ "annual improvement" wage increase for automobile workers last summer, the Wage Stabilization Board has known that eventually something would have to be done for others on productivity.

Stabilization officials, employers, and unions agree that wage increases that compensate for higher productivity are not inflationary and should be approved.

The big question is: How?

• **Steel Case**—In the next few weeks WSB will try to come up with an answer. One reason for getting an answer at this time is that it will be useful in handling the steel wage case. Steel industry negotiations with the United Steelworkers (CIO) begin Nov. 27 (page 34). By Jan. 1 it is expected that WSB will be given a dispute to decide.

Philip Murray has made clear that his union will not settle for the approximately 5¢ hourly increase allowable under the government's cost-of-living formula. It will take something close to 15¢ to avoid a steel strike. A productivity-rise formula would fill at least some of that gap.

• **Quick Start**—The AFL got the jump on the usually more alert CIO in try-

ing to bring the productivity pay issue to a head inside WSB. An AFL member, Elmer Walker, introduced a resolution approving a "policy" of permitting wage increases "which result from more efficient production."

Without mentioning Walker—who is a general vice-president of the International Assn. of Machinists, a union with an in-again-out-again record in the AFL—the AFL quickly publicized the proposal in its monthly economic survey under this heading: "AFL proposes new wage policy to prevent crisis."

Actually, Walker's proposal did nothing more than pull together in a single statement what had been said or done before. In the "whereas" prelude to the resolution, Walker made these points:

- Traditionally, collective bargaining agreements have compensated workers for "more efficient production" as well as for increased cost of living.

- WSB has recognized the cost-of-living yardstick.

- WSB has given "partial recognition" to more efficient production in approving the annual improvement factor in effect in automobile contracts before the wage-price freeze date.

- This creates inequities for those

workers who are not allowed to receive similar benefits under current WSB rules.

- Finally, WSB recognized this inequity when, in announcing its cost-of-living policy in August, the board said it was considering "conditions under which . . . wage and salary adjustments may be made which result in more efficient production."

Significantly, the resolution does not mention "productivity" or answer the question of how the increases would be approved. That is partly because union leaders and workers shy from the term "productivity" as possibly suggesting "speedup."

- **Nebulous**—A bigger reason is this: The labor strategy—and this is supported by the CIO members, too—is to avoid any specific measurement of productivity for any individual, plant, or industry.

Labor's idea is simple: (1) Every year American industry produces more through more efficient production; (2) the workers as a group are entitled to share in the benefits through higher earnings.

Of course, some workers, some plants, and some industries produce less efficiently. Others have no opportunity to increase production. Workers in these situations should not be penalized. Nor should workers responsible for better-than-average higher productivity get

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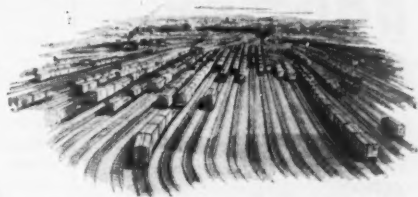
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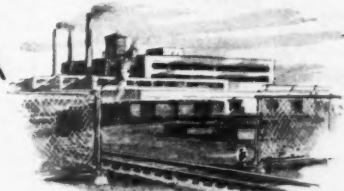
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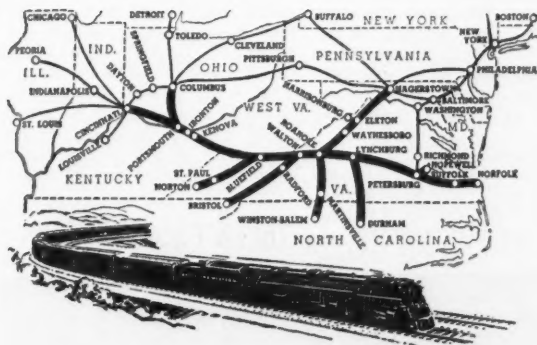
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• **Eric Johnston**—Support for a productivity increase came first from the Economic Stabilization Administrator, Eric Johnston; he—or his successor—must approve the policy. Last Feb. 27, when he approved the 10% catchup formula, which broke up the original WSB policy, Johnston asked WSB to “prepare suitable regulations to authorize productivity incentive payments” through June 30 where they existed before the Jan. 25 “freeze.”

This was aimed at approving the General Motors-type “annual improvement” increase. WSB approved these increases through June, then extended the approval indefinitely. This was strictly stopgap action to avoid trouble from Walter Reuther’s tough United Automobile Workers. The general problem still remains, because Johnston went beyond approving the increases in the automobile industry. He said:

“Such incentives are desirable at a time when the country is straining to step up production for defense.”

Now the government must “deliver” for other workers who also have an important role in defense production or who support it.

• **Industry View**—WSB’s industry members go along with the idea of compensating workers for increased production—where the results can be shown. They recognize that new equipment and technological improvements in themselves won’t reduce costs much if the workers don’t cooperate. They joined, for instance, in approving a 3% “annual improvement” increase in a plant where—after a long and bitter strike—the management had got a binding pledge from the union to cooperate toward higher productivity in return for the increase.

Industry members are not offering any specific proposal. They are waiting to see what the public members come up with. They wonder, for instance, how an employer can get a pledge of cooperation in an unorganized plant. Or how to figure the increase where productivity cannot be measured.

• **Public Members**—It will be up to WSB Chairman Nathan P. Feinsinger and his fellow public members to come up with a specific plan for handling productivity increases. The staff already is at work examining available outside studies on productivity and making some analyses of its own.

Thinking on the problem revolves around the cost-of-living escalator and annual improvement increase in the General Motors-UAW-CIO contract. The escalator, approved first in this industry, was later sanctioned for other workers as well. The productivity issue confronts WSB with a similar question:

Having approved a 4¢ annual increase in automobiles, can it deny the same thing to workers in other industries? WSB’s public members think not. But what conditions should be attached?

In the General Motors contract, the company has a long-term, five-year no-strike contract. The union agreed to cooperate in the use of new tools, methods, processes, equipment, and other factors in technological progress. In getting WSB approval of the 4¢-per-year wage increase, General Motors and the other companies have agreed not to use it as a basis for higher prices.

• **Real Gains**—The GM productivity wage increase amounts to about 24%. The company is confident it is getting more than that much increased production. In 1950, the second full year of its agreement with UAW-CIO, production records were smashed in every GM plant. Some plants even exceeded anticipated capacity. Profits, too, were above normal.

Historically, productivity of American industry has increased about 2% a year. A recent Bureau of Labor Statistics study of 26 selected industries showed output-per manhour increases in 24 of them between 1949 and 1950. In nine, the increase was 10% or more.

To adopt labor’s plan—giving all workers, say, a 2% increase for an assumed 2% average productivity increase for the country—has its advantages, public members point out. All workers would share alike; no standards for measuring productivity would be needed; administration would be simple. But they are not sure it is the answer. It fails in this respect: The worker doesn’t feel he is giving something in return for the extra pay.

• **Safety Valve**—In principle, however, WSB public members are sold on some kind of productivity-increase formula as a “safety valve.” In this period of no real war, no no-strike pledge, loose prices, high taxes, high profits, they feel that organized workers are not going to be satisfied with only a cost-of-living formula that keeps them even. They want to move ahead. The productivity increase might be a less-damaging vehicle for that than opening the door wider on new fringes and maybe writing some other new formula.

Three Face Jail for Antitrust Violations

A Nevada union leader and two businessmen this week face six-month federal prison terms—the first jail sentences handed down for an antitrust law violation since 1936. Federal Judge Roger Foley at Las Vegas found them guilty of conspiring illegally to fix prices and eliminate competition in the southern

THE ALCOHOLIC

Alcoholism is the abnormal and uncontrollable use of alcohol to an extent seriously detrimental to physical and mental health. This condition is now recognized as an important medical and public health problem.

It has been estimated by the National Committee on Alcoholism that there are about 65,000,000 people in the United States who drink alcoholic beverages at least occasionally. It is further estimated that some 4,000,000 of these 65,000,000 people have found that the use of alcohol has constituted a more or less serious problem in their lives.

The National Committee also reports that about 750,000 of these users of alcohol have drunk uncontrollably

to such an extent as to have seriously impaired their physical and mental health, as shown by the records of physicians and hospitals. Physicians label this last group definitely as true chronic alcoholics, and point out that, for instance, there are 50 percent more of them than there are known sufferers from tuberculosis.

Fortunately, medical, health, welfare, and religious agencies, industrial and other employers have taken a practical, realistic view of this problem. They are attacking it factually and without undue emotionalism. This enlightened approach offers great hope to all those who now are chronic alcoholics—as well as to those who are running the risk of becoming chronic alcoholics.

1. What is the cause of alcoholism?

Authorities have found no *one* cause for this condition. Research shows, however, that alcoholics are usually people who do not seem able to face life in a mature manner because of some underlying mental or emotional condition which the alcoholic himself may not clearly recognize. They seem to seek escape by excessive drinking—and eventually they become dependent on alcohol just to go on living.

Some authorities also believe that an alcoholic's body chemistry differs from that of normal persons, and that this difference results in an unnatural appetite for alcohol. Excessive drinking, however, is in all cases a *symptom*. Often the symptom can be removed, but it is very apt to return unless the underlying trouble is eliminated.

2. What are the dangers of alcoholism?

Both physical and mental disorders may result from excessive drinking. Nutritional disturbances frequently occur, and certain vital organs may be harmed. Eventually most alcoholics undergo distinct personality changes that add to their instability. Alcoholics are definitely "accident prone."

The industrial accident rate among ex-

cessive drinkers is from 100 to 200 percent higher than among non-alcoholics alongside whom they work. Other accident hazards are increased by the excessive use of alcohol. It also takes its toll socially in wrecked family life—and economically it is claimed to cause a loss of almost a billion dollars annually.

3. How can medical science help the alcoholic?

Although there is no specific remedy for alcoholism, much can be done to help a person stop drinking completely. The success of any form of treatment, however, depends upon the alcoholic himself who must absolutely want to break the habit. Once he has stopped, most authorities agree that the real alcoholic cannot drink again with safety.

Psychotherapy may be used to help the patient recognize his problems and how to deal with them without the use of alcohol. Certain medicines, which should be used only under the guidance of a doctor, are also available. These medicines may help to wean the patient away from drink.

It is important, too, for the alcoholic to re-establish a routine of healthful living through proper diet, sufficient relaxation and sleep, and attention to other health

measures that are usually disrupted by excessive drinking. In some cases, occupational guidance may be appropriate.

4. How can everyone help the alcoholic?

The general public—all of us—can help overcome the prejudices that have long existed about alcoholics by looking upon chronic drinkers as persons subject to serious physical and mental handicaps.

We must help them through sympathy and understanding, and aid them to obtain the type of treatment that they need. This treatment may be individual or group therapy given by the doctor, or mutual aid provided through organizations such as Alcoholics Anonymous.

We can also support and encourage the development of programs for the *scientific* study and control of this problem. In these ways, we can all do our part toward restoring thousands of men and women to healthy, happy, useful lives. Additional information on alcoholism is in Metropolitan's free booklet, 12515, "The Alcoholic."

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Metropolitan Life Insurance Company
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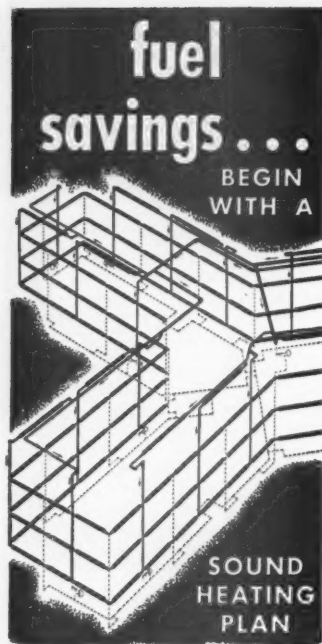
Please send me a copy of your booklet, 12515, "The Alcoholic."

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If you have a building to be heated with steam, you can heat it *better* (reduction of overheating and underheating) and at lower cost with a "Controlled-by-the-Weather" Webster Moderator System.

An office building cut steam costs \$5,671 in three years . . . A new hospital used 18% less steam than the conservative engineering estimate . . . buildings cut heating costs \$9,500. An apartment building saved \$567 in the first year.

The Webster Moderator System is tailor-made for the building in which it is installed. Each section receives the desired amount of heat. If you are planning the heating of a new building or bringing the heating of an existing building up-to-date, let us show you how the Webster Moderator System fits in. A Webster Representative will give you full details. Address Dept. BW11.

WARREN WEBSTER & CO.
Camden 5, N. J. Representatives in Principal Cities
In Canada, Darling Brothers, Limited, Montreal



Nevada heating and plumbing industry.

• **Coercion Charged**—Ralph Alsop, business agent of the Las Vegas AFL plumbers union, was found guilty of using his position to coerce plumbing and heating contractors into joining a price-fixing conspiracy. In addition to the term, he was fined \$5,000.

A. R. Ruppert, owner of the A. R. Ruppert Plumbing & Heating Co., got six months and a \$1,000 fine for conspiring with Alsop. His firm was fined an additional \$4,000. B. V. Provenzano, the third person in the conspiracy case, a heating and plumbing contractor, got a six-month sentence.

The prosecution charged that Alsop, working with Ruppert and Provenzano, threatened to cut off the supply of union labor for anyone not abiding by fixed plumbing and heating charges.

Alsop had been convicted earlier on charges of shooting a fellow union member and was free on a \$10,000 appeal bond.

• **Last Time in 1936**—The last jail sentence for an antitrust law violation was handed down in New York in 1936. Two defendants in a price-fixing and intimidation case involving the rabbit-skin industry got two-year terms and \$10,000 fines.

Steel Peace: Up to Government

Big Steel is running the show this time, and it wants the settlement made in Washington—where prices can be set along with wages.

Steel contract negotiations are due to open in Pittsburgh Nov. 27. But no agreement is likely to be reached at the meetings. Chances are that the Pittsburgh talks will merely set the stage for intervention by Washington.

U. S. Steel Corp. feels strongly that it cannot grant any wage hikes unless it gets compensating price increases. It believes its best chance to get higher prices is to have Washington dictate the terms of a new contract with CIO. The corporation sees less chance of price relief if it reaches a voluntary agreement with the union. A wage increase directed by the Wage Stabilization Board, however, would carry with it a practical mandate to the Office of Economic Stabilization to let steel prices go up.

• **Bellwether**—Big Steel is also determined to be the dominant employer factor in the contract negotiations. In former years the corporation abdicated its natural leadership, and other companies—most often Bethlehem—made the bargain with CIO that became the industry pattern. Now, insofar as U. S. Steel can control the situation, it will run the play for the industry team. That decision, too, is part of the strategy on prices. The corporation wants all the union's economic demands to go to Washington unresolved.

"It is a question which involves the basic anti-inflation program of our government and one which will clearly affect our entire economy," is the way Benjamin F. Fairless, U. S. Steel president, puts it. "Whether our workers are to get a raise, and how much it will be if they do, is a matter which probably cannot be determined in collective bargaining and apparently will have to be decided in Washington."

Thus the 1952 steel contract will be

produced in a triangular tug-of-war. And as of this week, the three forces involved stood by these positions:

The union: Wages must be raised substantially.

The industry: Prices are too low to pay for any wage increase.

The government: There must not be a strike in steel, but the price-wage line must not be broken—although it may be bent a little.

The federal government's anti-inflation spokesmen had their say on that. Nathan Feinsinger, Wage Stabilization Board chairman, told CIO recently that WSB is "determined to stay out of the (steel) bargaining room" if it can. He promised that, if a negotiated agreement comes before the board, it will be considered "entirely on its merits"—even if it goes beyond WSB raise limits.

Defense Mobilization Administrator Wilson added a warning: The government "can't have steel go out." He said that, while a voluntary settlement is highly desirable, the government will move in, if necessary, to bar a strike (BW—Nov. 3, '51, p. 30).

There seems no doubt now that the Administration will have to take a hand and that the "settlement" for 600,000 basic-steel workers will punch a hole in present wage-price ceilings. The question is: How big a hole will it be?

Philip Murray gave a hint when he outlined 22 demands hammered out by United Steelworkers' policymakers in Atlantic City. Many are just window-dressing—noneconomic demands not likely to cause a crisis in negotiations. But four could cause a lot of trouble. USW is demanding:

• A substantial wage boost, the amount unannounced, but reported to be about 15¢ an hour. That's well in excess of the 4¢ to 5¢ an hour USW is

Tell it to Kimberly-Clark

An idea exchange service for
advertisers and buyers of printing

Air currents give motion to retail display

A display that hangs from the ceiling and is slowly propelled by natural air currents has been one of our most successful promotion pieces. The new point-of-sale "Displa-Mobile" featuring our furniture, makes use of space *above* the merchandise. It does not compete with the volumes of ordinary floor displays retailers are confronted with, and therefore has about double the life. Because it is so perfectly balanced, even the slight air current caused by a person walking by sets the display in motion. We find most dealers highly enthusiastic about these unusual displays.

Charles G. Morrow, The Mengel Company,
Louisville, Kentucky



Art costs slashed!

Alarmed by the high cost of artwork to be amortized on short-run merchandising brochures, we accidentally discovered a

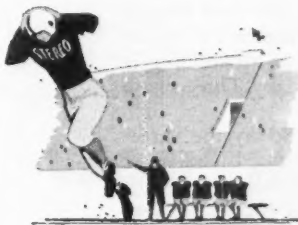


more effective technique and slashed costs as well. Instead of preparing a pencil or pastel layout to be laboriously repeated in ink later for reproduction, we order our layouts for "to the trade" brochures in ink. Headlines are speedball lettered and sketches brushed on in ink. Only halftones and body copy are indicated in pencil. When approved, the body copy is set by verity or lino and the litho-plate maker does the rest, using the layout as a keyline. When printed on offset enamel, these pieces carry lots of punch. Also, the freehand appearance lends a very creditable character to the mailings.

Carroll A. Ray, Production Manager,
Erwin-Wasey & Co., Minneapolis, Minnesota

A substitute for electros

Here's a real money saver for anyone who supplies jobbers or dealers with electro-types of their products for use in printing catalogs, etc. Instead of electros, supply nickle-faced stereotypes. The cost is less than half that of electros (when ordered



in lots of 10—all the same or assorted) and for all practical purposes they are every bit as good. Screens finer than 60 line are not satisfactory, but for line work, the results are equal to electros.

Randall H. Warne, Art Director,
Howell Advertising Agency,
Elmira, New York

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Any item of interest pertaining to advertising or printing is acceptable, and becomes the property of Kimberly-Clark. For each published item, a \$50 Defense Bond will be awarded to the sender. In case of duplicate contributions, only the first received will be eligible for an award. Address Idea Exchange Panel, Room 140, Kimberly-Clark Corporation, Neenah, Wisconsin.

As paper is still on allocation, please help prevent the shortage from spreading further. And remember — you add crisp freshness and sparkling new sales appeal to all printing jobs—at less cost, with less waste—when they're done on fully-coated Kimberly-Clark printing papers. Use them whenever possible.

Kimberly-Clark Corporation NEENAH, WISCONSIN

Quality Machine-Coated Printing Papers

Hifect* Enamel Lithofect* Offset Enamel Trufect* Multifect*

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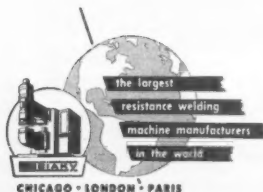
5500 military planes this year...

means millions of welds—
over 90% of them are being produced with
Sciaky Spot and Seam Welders

WHAT'S so important about this fact? Simply this—the overwhelming preference for Sciaky machines in this most critical of all welding is proof of the superiority of Sciaky Three-Phase resistance welding.

Developed and pioneered by Sciaky, the Three-Phase Principle is now the accepted method of resistance welding as was the Sciaky Storage-of-Energy Principle during World War II. Because of its versatility the Three-Phase Principle has now made Sciaky resistance welding a practical answer to joining requirements for many ferrous and non-ferrous metals in a wide variety of industries. It can work for you . . . and Sciaky

engineers will show you how.
Write for bulletins describing the Three-Phase Machines.



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entitled to under present WSB rules.

- A guaranteed annual wage, which Murray says can be granted now without lifting industry's wage cost.

- A reexamination of methods of paying incentive rates on piecework or tonnage jobs in the industry (BW—Nov. 10 '51, p. 26).

- The union shop, which requires membership in the union as a condition of continued employment.

The demand for a wage increase had been taken for granted. However, there was some surprise in the industry when Murray said he was in earnest this year in demands for a guaranteed annual wage and the union shop.

Union members employed in basic steel have voted overwhelmingly for the union shop in National Labor Relations Board elections. But only two major companies—Kaiser Steel Co. and Crucible Steel Co.—have granted USW a union shop. There's still a lot of opposition in the rest of the industry.

- **Annual Wage**—The steel industry is generally regarded as cyclical—hence the industry says it is not adapted to an annual-wage plan. The union feels the industry can now count on a high level of production for some years to come. So, says USW, this is the time to set up a guaranteed-wage plan.

According to the union, a guarantee of 70% of a year's work, for example, wouldn't cost the companies any money while they are operating at 105% of capacity. They add that companies haven't dropped below 100% for many weeks.

Some steel executives are countering with pessimistic warnings that a steel surplus is possible in 1952. Arthur B. Homer, president of Bethlehem Steel, said last week that the present shortage of steel is caused by improper distribution—a problem that can be solved—rather than by inadequate production.

- **"Unthinkable"**—Both Fairless and Murray recognize that an interruption in steel production would be dangerous. Fairless told U.S. Steel employees recently that he considers a strike "unthinkable" now—when "the lives of our men in Korea must depend on the uninterrupted flow of weapons."

Murray secretly told his wage policy committee that the union must remember that the nation's interests come first—and that those interests are dependent upon a steady flow of steel. But Murray did not say that he would not gamble on a strike if it should become necessary in the bargaining strategy of the union.

Government and industry—mindful of the pension strike in 1949, which the government tried to stop—know full well that, if Murray tells rank-and-file members that they should strike to back up "reasonable" demands, they'll do it without further questions.



The most comfortable town in the world

Spotted along the thread of 30-inch pipe that stretches across the driest, hottest land in the world . . . are the *most comfortable towns* in the world.

These are the communities of men—and their families—who tend the pumping stations on the Trans-Arabian pipeline. It's the 1068-mile pipeline that saves hauling oil by tanker 3200 miles from the Persian Gulf to the Mediterranean.

Here the heat hits 115° in summer. Here, alternately, *shamals* (dust storms) cover the towns with dry silt, then the hot winds bring up drenching humidity from the Persian Gulf. It's a vicious combination that adds up to the toughest operating conditions in the world.

Yet the homes and the buildings surrounding the pumping stations and water holes are cool and comfortable the whole year 'round—air-conditioned completely by Worthington. A central system pipes cold water through insulated street mains to individual air-cooling units.

It's another spectacular case of Worthington diversification . . . for

Worthington *also* furnished the Diesel engines to power the pumping stations—39 of them, and many other types of equipment, too.

Such diversification builds stability . . . makes Worthington, 112 years old, a strong link in the far-flung chain of American Business.

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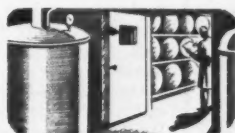
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And other machinery for GOOD WATER AND SANITATION, PETROLEUM PRODUCTS, MORE ABUNDANT FOOD, FASTER, MORE COMFORTABLE TRANSPORTATION



Once a nibbling tidbit now an important staple food, 330,000,000 pounds of potato chips are made yearly. To counteract moisture . . . the chip's eternal enemy, Rhinelander makes some of the finest, tightest papers known to the potato chip industry.

A Glutton for Work ...this paper



An Odd Job for us is packaging welding rods. These may cost many dollars per pound and they are perishable. Our protective paper that does this job must be good; indeed it is. Maybe *you* have a parallel problem.



Glassine and Greaseproof
... the functional papers that do so many tough jobs well on hundreds of nationally known foods and other household and industrial products.



BRICKLAYERS' take-home pay will vary from coast to coast as CISC starts . . .

Pegging Construction Wages

WSB's Construction Industry Stabilization Commission will determine hourly wage rates and premium pay on an area basis. Higher rates will have to be O.K.'d by commission.

Now, as in World War II, wage stabilization in the construction industry will follow rules of its own. The rules will be made by the Construction Industry Stabilization Commission, a special, largely autonomous branch of the Wage Stabilization Board.

• **"Area Basis" Formula**—Under the setup, construction wages and fringe benefits are stabilized on an area basis, and the rates will vary in different parts of the country. CISC is now busy determining "area wage rates" for the 19 building trades crafts in as many cities as possible. These are the rates that contractors may pay to on-site construction mechanics and laborers without going to CISC for approval.

For example, CISC has set carpenter rates at \$2.69 an hour in Milwaukee, but only \$2 in Concord, N. H.; bricklayer rates have been set at \$3.30 in Seattle and at \$2.50 in Charlotte, N. C.; ironworkers, \$3.25 in Trenton, \$2.35 in Denver—and so on, with rates in between in other cities. Several hundred "area rates" have been determined.

• **Up to 10%**—CISC does not use the automatic cost-of-living formula that WSB allows for factory and other wage earners, but it will approve area rates up to 10% above their pre-Korea levels. CISC disapproved a cost-of-living escalator clause in a carpenters' union con-

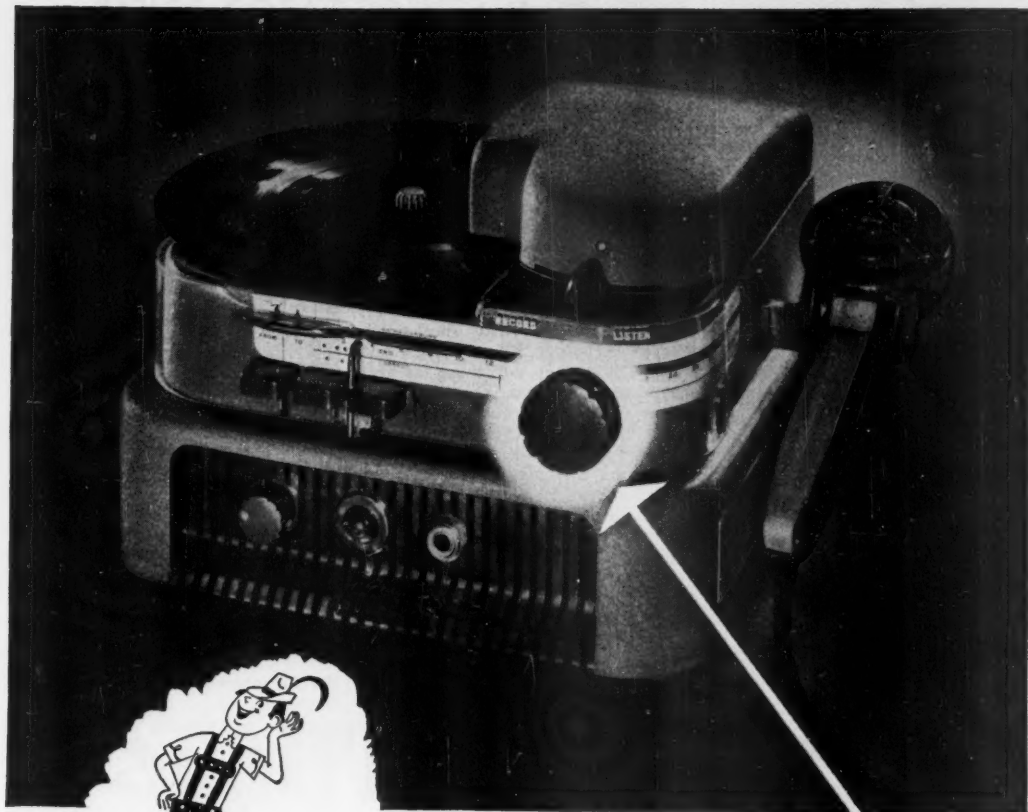
tract in Rockford, Ill. Nor would it sanction an incentive bonus, above the established union scale, for Clark & Fray Construction Co.

Within the 10%, CISC is approving, when requested, higher rates for individual contractors in advance of an "area rate" determination.

• **Premium Pay Angle**—Controlling hourly wage rates is only a part of CISC's responsibility. It's also concerned with premium pay practices—the fringe benefits—like travel pay, subsistence, "isolation" pay, overtime, pensions, health insurance, holiday pay, etc. These go into wage costs and have become more common in construction in recent years as a result of the building boom, the scarcity of construction labor in heavy-building areas, and the need for moving workers from different parts of the country.

• **Test Case**—You can get an idea of what some of these existing premium pay practices are—and where they exist—from rulings of CISC. A test is before WSB in a dispute involving construction employees of Atkinson-Jones Construction Co., at the Hanford Atomic Energy Commission project at Richland, Wash. The issue is more isolation pay (BW—Oct. 27 '51, p. 30).

Since 1948, building tradesmen working in the barricaded area have got \$2 a day extra if they live away from



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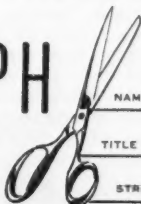
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You, too, can count on substantial savings with Dunham Vari-Vac® Differential Heating. That's because this fully automatic, weather controlled system uses far less steam to bring you unsurpassed comfort... regardless of the size, type, age or location of your building.

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DUNHAM

heating systems and equipment

the Hartford area and \$1.50 extra if they live on the project site. The unions want these figures raised by \$1. The contractor has offered 25¢ more. Unable to agree, they have asked WSB for a binding decision on the issue. This was WSB's first dispute case submitted voluntarily by a company and union. The board must decide not only the differences between the two sides, but must see to it that its decision meets wage stabilization objectives.

• **For Example**—Here is a sampling of premium pay practices allowed so far:

• **Isolation pay and subsistence** in lieu of travel pay so far range from \$2.20 a day for AEC sheet-metal workers in Paducah, Ky., to \$3.50 a day for AEC workers not living at the campsite in Las Vegas, Nev.

• **Travel pay** permitted runs from 5¢ a mile beyond city limits for plumbers in Greenville, S. C., to \$31.50 a week for Syracuse (N. Y.) asbestos workers.

• **Shift and overtime premiums:** from 25¢ an hour for Denver electricians to double time for overtime for bricklayers at Parkersburg, Va.

• **Welfare pay:** Plans cover a wide range—from a 3% contribution to sheet-metal workers' welfare fund in Baltimore, to a flat 10¢ an hour for operating engineers in Hartford, Conn.

U.S. Bars Loss Claim During Mine Seizure

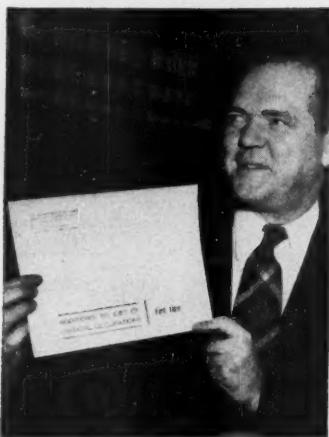
The government has refused to reimburse a coal mine operator for salary and depletion expenses incurred during government possession of his mine. U.S. Comptroller General Lindsey C. Warren threw out a claim of \$6,074.50 from W. H. Day, whose mine at Concord, Tenn., was seized in the 1946 United Mine Workers strike.

Government orders and regulations taking over the mine, Warren held, specifically provided that the company would assume all operational expenses and losses and also take all profits. He ruled that Day's claim of \$4,550 for his own and his wife's salary and \$1,524.50 for depletion were ordinary operating costs that the company had to assume.

Day's argument that he continued operation—at a loss—because of government pressure was rejected. The government didn't order him to continue; it only urged him to do so, Warren said.

Another coal mine operator, the Pewee Coal Co., was awarded \$2,241.26 by the U. S. Court of Claims for losses suffered during the 1943 mine seizure. The Comptroller General, in ruling on the Day claim, made no reference to the Court of Claims award, which was upheld by a 5-4 decision of the Supreme Court last May.

LABOR BRIEFS



Time-saver in the form of a "selfmailer" system for Labor Dept. publications, worked out by Herman Kupfer (above), is cutting government costs and speeding up mailed data releases by a day or two. Kupfer won an efficiency award and a \$500 annual raise for his idea.

Pay for supervisors can be increased if they work longer than the regularly scheduled work week for which they were originally hired, says the Salary Stabilization Board. But the increase must be figured at straight time for additional hours unless a higher rate is set by a plan in effect before the wage freeze.

Meaning of "equal" in a Jones & Lamson Machine Co. contract with UE at Springfield, Mass., will be arbitrated. The company recently switched insurance plans. The new benefits are slightly different, but "equal" according to the company's definition. UE argues that the word "equal" in its contract with the company means "same" benefits.

New strike technique showed up recently in Tokyo. Japanese government workers, barred by law from striking, quit eating lunches. Their idea: Make the government lose face by implying wages are too low for workers to buy midday meals.

White collar raises averaging 11½% were announced last week by the Tennessee Valley Authority. Employees will get from \$300 to \$800 a year more.

Salary Stabilization Board has a new chairman. Justin Miller is replacing Dr. Raymond B. Allen. Miller is board chairman and general counsel of the

Metallurgical furnace investigations in the laboratory influence heat processing in manufacture.

**Laboratory-proved
techniques**

assure the

**factory-made
quality**

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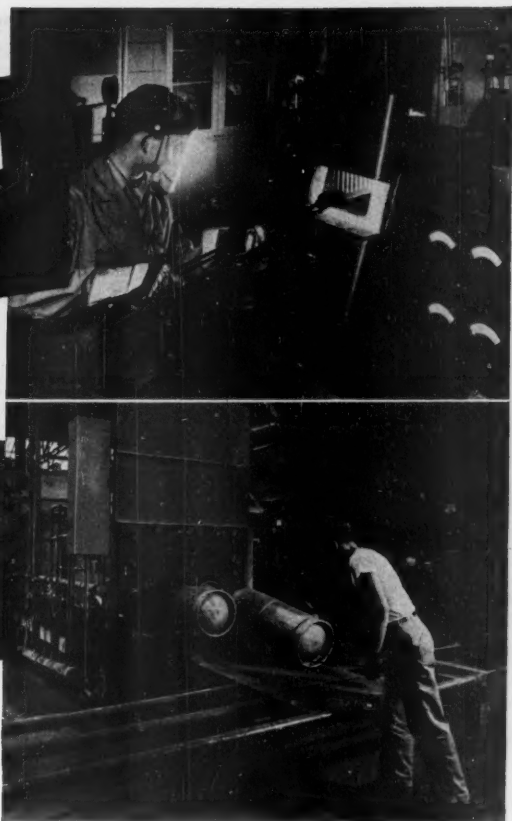
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To meet industry's ever-advancing needs for pressure vessels and deep-drawn shapes of lighter weight, higher strength, greater dependability and longer life, Scaife maintains constant research and engineering studies of materials, methods and products.

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The name SCAIFE on pressure vessels and deep-drawn shapes means highest quality and most advanced design.



Starting with a circular sheet of steel—

a cup is formed by a conventional drawing operation.

A continuation of this pressing operation turns the cup "inside out" without removing it from the dies,

completing—in a single stroke—the deep-drawn shape.

Deep-drawn shapes made by the Scaife reverse-draw process (described above) have uniform wall thickness throughout the entire length of the draw. Can be made in various lengths, diameters and symmetrical shapes.

Scaife cylinders are used for liquefied petroleum gases, freon, acetylene, sulfur dioxide and other materials. They are light in weight, strong and durable.

Scaife pressure vessels for air, gases and liquids are made in standard and special designs and for various types of service.

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Diesels and electrics perform most of Milwaukee Road freight, passenger and switching service.

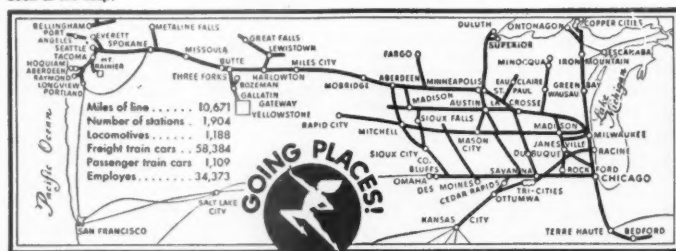
FULL THROTTLE!

The men in the cabs of The Milwaukee Road's big diesels can *high-ball* right along. And, everybody else on the Railroad can go at full throttle, too. *The Milwaukee's facilities are modernized to accelerate every operation in the handling of traffic.*

Traffic managers and other executives interested in shipping and distribution in Milwaukee Road territory are invited to ask us for information. We have agents in principal cities — well-informed, transportation men who are eager to serve.

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Look at the map!



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ROUTE OF THE
HIAWATHAS

CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD

National Association of Radio & Television Broadcasters.

No-strike pledge has been given by AFL unions engaged in building the Savannah River H-bomb plant. A spokesman told a Congressional committee investigating labor conditions there that "we do not intend to have any work stoppages on that job."

"Quit loafing" on the job, the head of the Chicago AFL Building Trades Council urged unionists. He warned that "killing time on the job jeopardizes your livelihood and undermines your union."



New Mine Bureau Head Will Push Safety

John J. Forbes, one-time coal mine "breaker boy" and for 36 years an employee of the U.S. Bureau of Mines, is the new head of the bureau. The result probably will be a federal crack-down against unsafe mines.

Forbes, as head of the Bureau of Mines' Division of Safety & Health, has plugged in the past for a stronger government role in enforcing safety. He favors giving federal inspectors the right to shut down mines they consider unsafe. At present, that right is held only by state inspectors.

John L. Lewis' United Mine Workers strongly opposed the appointment of Forbes' predecessor, Dr. James Boyd, in 1947. Boyd finally was confirmed by the Senate, over UMW "unfitness" protests, a year after his appointment. Recently, he resigned after differences with Secretary of Interior Oscar Chapman. (BW—Oct. 6 '51, p. 168.)

In contrast, Forbes has UMW's best wishes, largely because of his safety views.



"Good clean game, boys!"

A classic battle in the mud may be good clean sport. But it's a headache to the laundry who must get the uniforms spotless afterwards—to be a colorful part of the next big game.

From heavily soiled sports gear to women's frilly blouses, leading laundries get better results with washing compounds (including soaps) which contain Wyandotte Carbose*—Sodium CMC. For this specialized detergency promoter boosts soil removal and whiteness retention enormously, makes built soap go further, and reduces the loss in fabric life.

An important ingredient in many Wyandotte cleaning products, Carbose is being increasingly used by other detergent manufacturers. With its other applications in the textile, paper and paint industries, Carbose is another of the Wyandotte-pioneered products that fill industry's needs for new, quality chemicals.

If you have a knotty chemical or cleaning problem, you'll find it profitable to call on us.

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Many people judge a laundry by its shirt work. So leading laundries make sure of superior results with Carbose compounds.



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Designing

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HOW CORNING TECHNOLOGY *Speeds* PRODUCT DEVELOPMENT



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PRODUCTION FACILITIES FOR ALL TYPES OF GLASSWARE
—Corning's eleven plants make available machinery and methods fitted for the production of a wide range of glass products on an economical basis.

something new?

to work for you... here's a typical example

This glass "egg" contains a shaped explosive charge, punches holes in surprisingly thick oil well casings.

The McCullough Tool Company developed the idea, Corning Technical Services developed the special glass shell and the manufacturing process for economical mass production.

Why glass? Because glass would disintegrate in such a way as to leave wells completely free from damaging debris. And the glass "egg" also affords complete protection from moisture and corrosion at pressures up to 10,000 pounds per square inch and the high temperatures prevailing in deep oil wells.

When you come to Corning, you'll find the same Technical Services that solved McCullough's prob-

lem, ready to make your idea a reality with glass.

First of all, there's Corning research with its vast storehouse of glass formulae with every conceivable variation in properties—in corrosion resistance, extra strength, in light transmission, dielectric strength, heat resistance or what you will.

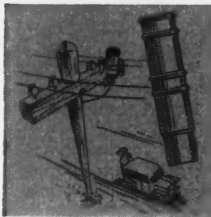
Then, there's 100 years of Corning engineering experience in the manufacture of glass in countless shapes and forms. And, there are unsurpassed facilities to produce what you need quickly and economically.

Let Corning Technical Services work on your problem. You may find glass the answer for which you're looking. Let us know what you have in mind, or check the coupon for the literature you need.

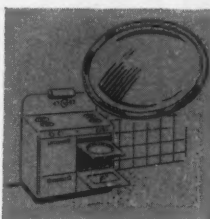
IDEAS IN GLASS... *Made a reality by Corning Technical Services*



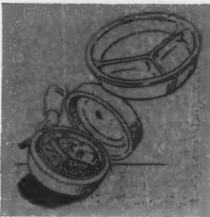
The High Voltage Engineering Corporation needed an insulating material capable of withstanding long periods of electron bombardment for the Van de Graff generator. Electrical characteristics had to be *known and uniform*, include high dielectric strength, low loss factor and high volume resistivity. Corning developed a glass specifically designed to answer these requirements—and helped make this generator for super voltage X-rays possible.



Here's an idea that really clicked—a glass body for lightning arrestors on power lines which permitted inspection from the ground. Service crews could see through the glass without climbing poles. Corning was able to supply a glass with the electrical, chemical, thermal and mechanical requirements the service needed. And Corning knew how to make it into a difficult shape at low cost for Line Materials Corp.



Stove manufacturers are always looking for something new. Corning has often found it for them. This glass broiler plate is a novel innovation that improves flavor of meat by sealing in the juices, is easy to clean, and reduces smoking. Again, Corning was able to select a glass that met all requirements for durability and heat resistance. And it could be economically manufactured to close tolerances.



The Meal-pack Corporation had a big problem—how to make a dish that could stand a preheating of 275°, fit a container accurately to insure a tight seal and retain heat over a long period of time. They brought their problem to Corning and found the answer in well-known PYREX brand glass. Here, Corning engineers already had the glass that solved the problem and the engineering know-how to manufacture it to exacting specifications.



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- ☐ B-83 "Properties of Selected Commercial Glasses"
- ☐ B-84 "Design and Manufacture of Commercial Glassware"
- ☐ B-88 "Glass in the Design of Electrical Products"

GOVERNMENT



THEY'LL TALK

Likely witnesses include Louis Johnson, left; Harold Baynton, head of Justice Dept.'s alien property office, and . . .



. . . Leo T. Crowley, left, Alien Property Custodian during the war, and Jack Frye, right, \$72,000-a-year president of General Aniline & Film. As they talk . . .



HE'LL LISTEN

It's Sen. Alexander Wiley's show.

Alien Property Office Is Next on Pan

With the Reconstruction Finance Corp. pretty much cleaned up, and scandals at the Bureau of Internal Revenue bubbling merrily, Congressional investigators are turning their scrutiny to another government agency: the Office of Alien Property.

Digging could very well uncover a bonanza of headlines. The volume of money handled by Alien Property may be piddling compared with what's involved at RFC and BIR, but the plums handed out—if that's what they are—are much juicier than any examined up to now. Instead of \$10,000 mink coats and free vacations, Alien Property has been dealing in jobs worth as much as \$72,000 a year and good indefinitely.

At the earliest, Congress could get down to formal hearings in January, when it returns from recess. But the prime mover behind an investigation has already started getting ready. Sen.

Alexander Wiley of Wisconsin, who is ranking Republican on the Senate Foreign Relations Committee, has asked OAP for a sheaf of information on the handling of corporations seized during World War II as enemy property.

• **What He'll Find**—Wiley is sure to glean some nuggets from this material. For example, he will rediscover that:

• Jack Frye, a regular contributor to the Democratic Party, is the \$72,000-a-year president of General Aniline & Film Corp.

• The law firm of former Defense Secretary Louis Johnson, who took the job of party treasurer in 1948 when no other Democrat would touch it, has made hundreds of thousands of dollars as counsel to General Aniline and to General Dyestuff Corp., another OAP holding.

• William Siskind, brother of a former law partner of former Demo-

cratic chairman Boyle, has done some expensive legal work for P. Biersdorf, a patent-holding company also owned by Alien Property.

• **Good Job, Too**—Of course, the senator may discover that Alien Property has also done an efficient job of managing and disposing of seized property.

In the years since Pearl Harbor, OAP has held some \$700-million worth of tangible property, plus additional millions in hard-to-value patents, copyrights, and works of art. Right now, tangible property held comes to \$460-million. In addition, OAP has turned over to the War Claims Commission about \$120-million and transferred some \$90-million to former owners, to the Philippine alien property custodian, and other accounts.

With a staff that once numbered 1,200—since cut to 620 by Congress—OAP has disposed of 8,100 claims and



NO GAS TODAY!



It is difficult to picture what modern America would be like without gasoline. Imagine—more than forty-nine million motor vehicles brought to a standstill. No fire engines, police cars or grocery trucks would move—a complete transportation paralysis could result.

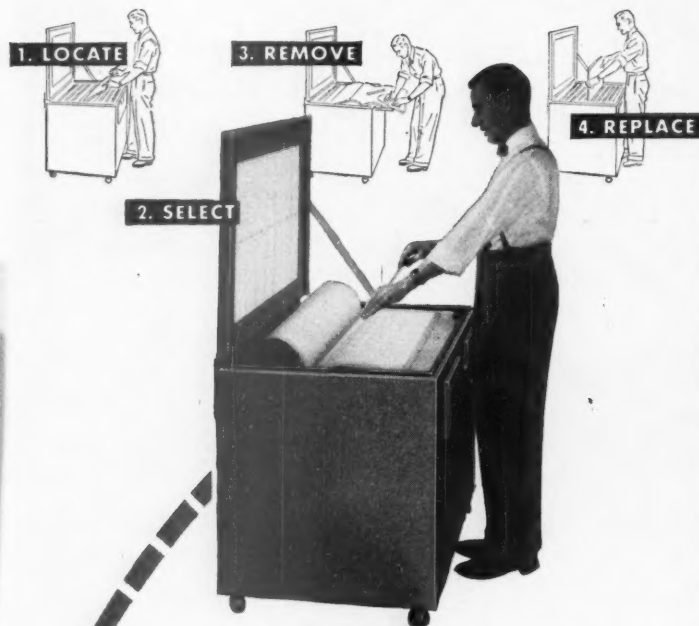
Most of the thousands of filling stations are dependent on trucks and trailers for their supplies. Many, many other businesses are similarly dependent upon truck delivery.

Pressure groups and competitive interests are urging punitive tax laws and penalties against the motor transport industry. Unless such moves are counteracted by clear thinking citizens, there could be an epidemic of "No Gas" signs in America.

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3,500 lawsuits, but 53,238 claims and 1,460 suits still clog its dockets. Two of the biggest units disposed of are North American Rayon Corp. and American Bemberg Corp.

Under OAP management, the property held has earned \$46-million. Even more striking has been the increase in the asset value of many of the corporations. For example, assets of General Aniline & Film Corp., the biggest of all, have risen from \$68.75-million to \$124.4-million under OAP operation and have paid a total of \$8.42-million in dividends. An even more startling increase in assets was registered by Karl Lieberknecht, Inc.—from \$1.97-million to \$8.21-million.

• **Pervious Cloak**—OAP's record, however, is no guarantee that it will escape censure. After all, both RFC and BIR had heavy entries on the plus side, too.

However, Sen. Wiley won't find Alien Property quite so vulnerable as RFC or BIR. Charges of "gravity..." practically pouring down certain vests may be hard to prove. After all, there's a real difference between a favor or gift to employees of one agency and legal, government-approved compensation to appointees of another.

• **Crosscurrents**—Once he gets the names and figures he has asked for, Wiley may be able to show that the top jobs in corporations owned by OAP are, in fact, packed with Democratic Party stalwarts. But—Democrats will claim—that doesn't necessarily imply improper management or that the appointments were unjustified.

The Administration may rest on the claim that the appointees are qualified, their salaries in line with what industry pays. Indeed, the Democrats may counterattack with a little investigation of their own—into the sources and motives of Wiley's deep interest.

Actually, the senator and his staff have made the mainsprings of his interest clear. He is out to rectify what he considers an injustice to one individual. But he also thinks OAP ought to be more closely subject to Congressional review.

• **Halbach Case**—The particular case that aroused the senator involved the holdings of the late Ernest Halbach, a U.S.-born resident of New Jersey, in the General Dye-stuff Corp.

Back in 1942, when Leo Crowley was Alien Property Custodian, the agency took over Halbach's interest in the corporation on the ground that he was fronting for Germany's I. G. Farben. Its proof: Halbach paid only one-quarter the real value of the stock and gave Farben an option to rebuy at the same low price.

Halbach immediately sued the government for return of his property. However, he compromised his case "with prejudice"—meaning he agreed

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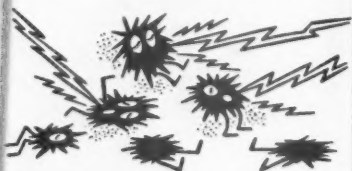
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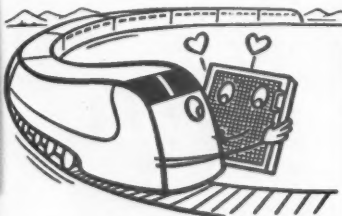
BY
O.SOGLOW



WHERE DUST MAKES ELECTRICITY! Dust storms on the Sahara Desert are often accompanied by frightening displays of lightning. The cause: static electricity built up by collisions between dust particles and friction between wind and dust particles.



WHERE ELECTRICITY KILLS DUST! Electromaze® electronic air filters literally shock dust and smoke out of the air with an electric charge. Used wherever super-clean air is needed. "File drawer" design makes Electromaze easier and less expensive to install, easier to clean.



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not to reopen—and received the option price from the government.

• **Reopened**—Recently, Halbach's heirs have been trying to collect the full market value of the stock. They bolstered their case with a letter written to Sen. Wiley by Crowley, a constituent from Wisconsin. In his letter, Crowley charged: (1) that a "powerful group in the government" continued "constant pressure" upon him to oust Halbach, (2) that the ousting was "a shameful injustice," and (3) that Halbach settled "under compulsion."

Acting on this letter, Wiley offered an amendment to the joint Congressional resolution to end the state of war with Germany. In effect, his amendment would have nullified the "with prejudice" clause, permitting reopening of cases like Halbach's.

Alien Property officials, accidentally

hearing about this rider, rushed to Capitol Hill with an affidavit signed by Crowley, watering down his charges. Wiley's amendment, in turn, was watered down, too. It was finally beaten on the Senate floor.

• **Fight Just Started**—The senator, however, has not surrendered. Instead, he has introduced a separate bill to accomplish the same end as his beaten amendment. His current probe, and the investigation he will probably call for in January, are designed to support the bill.

It's hard to say whether his move will succeed—or backfire. But whether or not OAP gets stuck with the scandal label, one thing seems sure: Congress won't go on letting an agency of the government appoint men to \$72,000-a-year jobs without passing on their qualifications.

Unlimited Aid for Expansion

Government mobilizers now have authority to give business all the financial help it needs. Commitments of one sort or another already total \$1.7-billion.

The government now is in a position to give business all the financial aid it needs for defense production expansion. Last year it was different, but a recent amendment to the Defense Production Act changed the picture.

Last year government mobilizers got several hundred million dollars in the Defense Production Act to carry out industry's needed expansion. But they soon hit the bottom of a seemingly huge barrel of credit. Reason: Legally, they had to have one dollar in the bank to cover every dollar's worth of commitments made.

• **\$500-Million Commitment**—Thus, in setting up a government "pooled order program" to throw the machine tool industry into high gear in a hurry, the mobilizers committed the government to purchase some \$500-million of machine tools. Everyone knew the government itself would buy only a tiny fraction of the tools. Private industry would take the tools and pay for them as they came off the production lines.

The requirement of 100% backup of government commitments stymied government aid to expansion for a while.

Now, though, the mobilizers have almost unlimited credit resources. New amendments to the Defense Production Act say the mobilizers have to charge against their lending ceiling—now \$2.1-billion—only the "probable ultimate net cost to the U.S."

• **Legally . . .**—This simple change makes all the difference. The machine tool "pooled order program" now commits the government to buy \$536-mil-

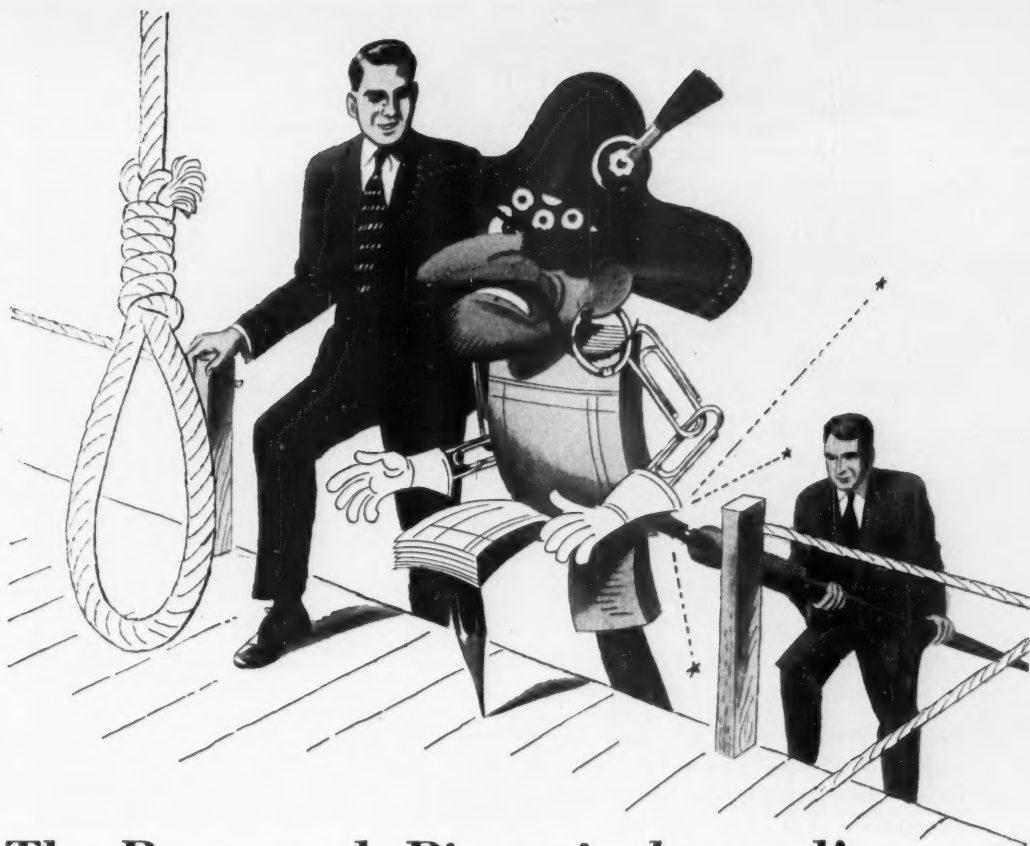
lion of machine tools. But instead of having to charge all its figure against their \$2.1-billion kitty, the mobilizers are charging off \$1,074,000—which they estimate is the probable ultimate net cost to them. This figure—two-tenths of 1% of the gross volume of transactions—is based on the loss experience of similar programs of World War II.

• **Bird's Eye View**—The first quarterly report on all direct financial aids to expansion gives a bird's eye view of just how much help the government is giving now. It covers commitments to purchase such things as metals and minerals, to buy and resell minerals such as cobalt, and natural rubber, and to make direct loans to a wide variety of businesses.

The total commitment as of Sept. 30 runs to \$1.7-billion. But the mobilizers are charging against their credit pool only \$73.9-million. Up to the end of the third quarter of this year, the Defense Production Administration thus has tapped only approximately 3% of the total expansion funds available to them.

The new report makes it clear that the mobilizers aren't likely ever to run short of funds for industrial expansion. In fact, it estimates that the government won't lose a single dollar on \$69,779,000 of direct loans to businesses. At this rate, there is no ceiling at all on loans under the Defense Production Act.

• **100% Loss**—At the other end of the scale, the mobilizers are charging off as 100% loss the \$5,409,000 they're dis-



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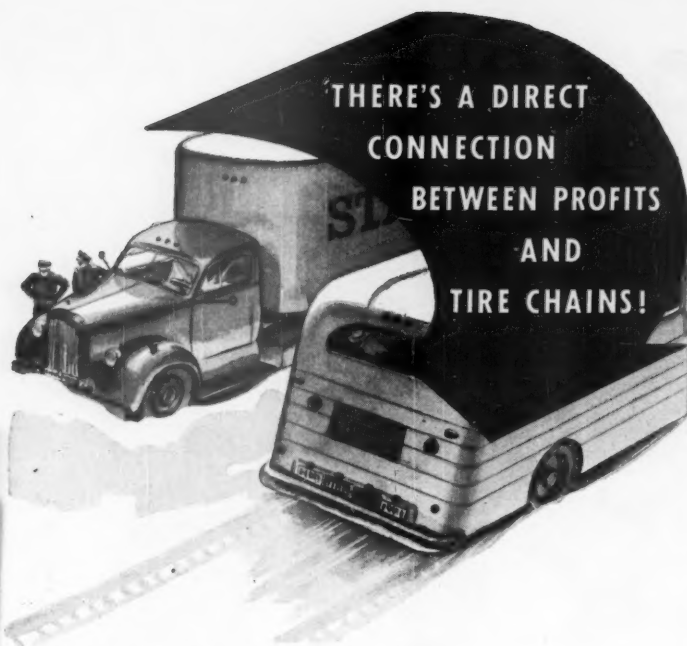
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Smart businessmen equip every company car and truck with tire chains. They insist chains be used when ice and snow make driving hazardous. This smart management pays off in many ways. It keeps cars and trucks on the road where they earn their way . . . speeds deliveries . . . cuts down costly accidents.



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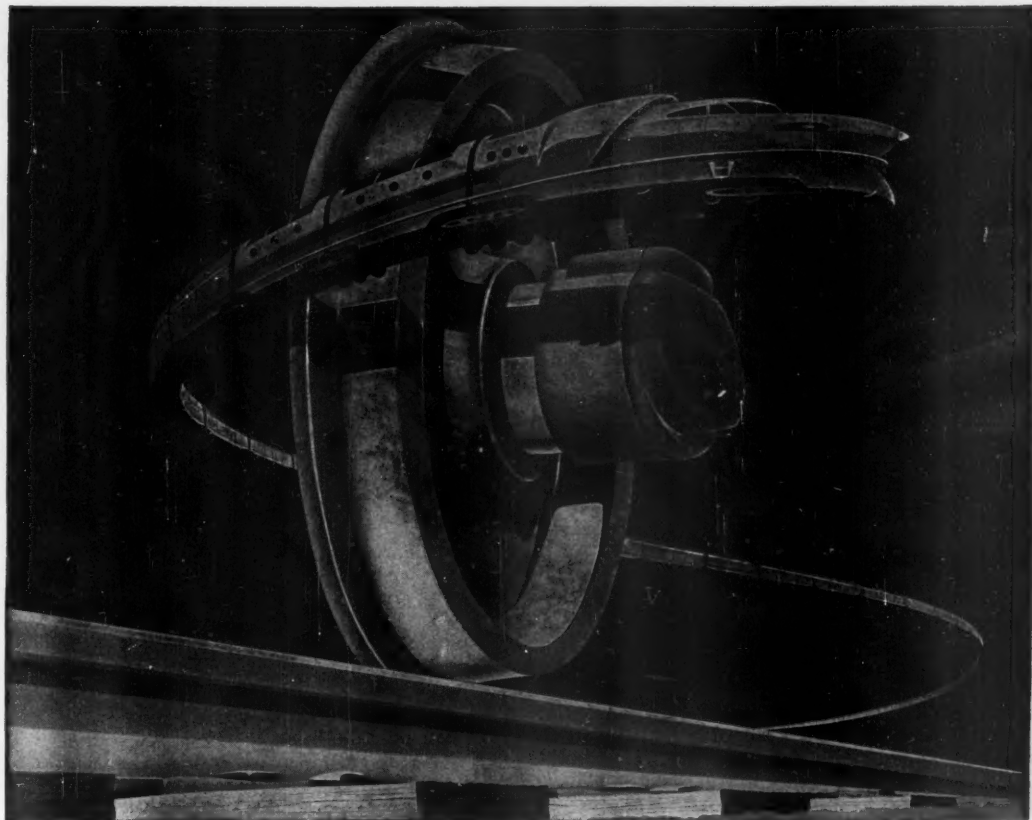


bursing to finance prospecting for asbestos, antimony, cobalt, fluor spar, and other minerals. These funds have been considered outright grants, and are listed as such.

The purchase and resale program on tungsten covers \$9,592,000, with the estimated cost to the government fixed at \$1,198,000. The report notes: "Program consummated involves 119,797 short tons purchased in foreign markets and resold at domestic market price. Probable ultimate net cost based on \$10 per short ton." Other similar programs also involve fairly sizable subsidies.

• **How Much**—Here's a sample of what expanding industry will get:

Program	Total Involved	Probable Net Cost to U. S.
Aluminum		
Commitment to buy	\$217,800	None
Buy and resell	5,040	None
Atomic energy		
Direct loans	388	None
Bldg. materials		
Direct loans	1,438	None
Castor beans		
Buy and resell	372	284
Chemicals		
Direct loans	1,720	None
Communications		
Direct loans	275	None
Cobalt		
Buy and resell	18,693	None
Copper		
Commitment to buy	88,600	1,836
Electronic products		
Direct loans	8,961	None
Iron & steel		
Direct loans	29,864	None
Linseed oil		
Buy and resell	54,715	12,715
Machinery & components		
Direct loans	8,297	None
Machine tools		
Commitment to buy	536,876	1,074
Magnesium		
Buy and resell	2,330	1,047
Manganese		
Buy and resell	88,515	42,765
Munitions		
Direct loans	1,569	None
Molybdenum		
Commitment to buy	146,250	4,150
Petroleum		
Direct loans	2,545	None
Rubber		
Buy and resell	462,566	None
Titanium		
Buy and resell	5,000	None
Commitment to buy	15,000	None
Transportation		
Direct loans	10,902	None
Zinc		
Commitment to buy	21,534	918



When "friction-free freights" are three miles long...

National Oil Seals will protect the bearings

Today's streamlined passenger trains roll on anti-friction bearings. It is reasonable to expect that eventually all freight cars will be so equipped.

When that day comes, freight trains three miles long will be an everyday reality. And you may be sure their modern, frictionless bearings will be protected by National Oil Seals—to hold lubricant in and keep out water and roadbed grit.

Forward-thinking National engineers are continually researching and testing oil seals for the machines of tomorrow. Because of this "years-ahead" research, National Oil Seals give "years-ahead" performance in your products of today. We welcome tough sealing problems. May we help you?



The "friction-free" railway car is already on the rails in both new car designs and in conversions of existing rolling stock. National Oil Seals (the key to better bearing performance in any application) are at present being successfully employed in these new bearing units—fitting proof that National's "years-ahead" planning for tomorrow, provides "years-ahead" performance today.

NATIONAL MOTOR BEARING CO., INC.

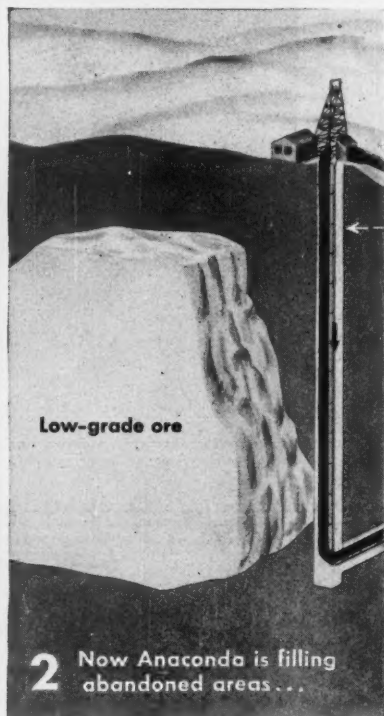
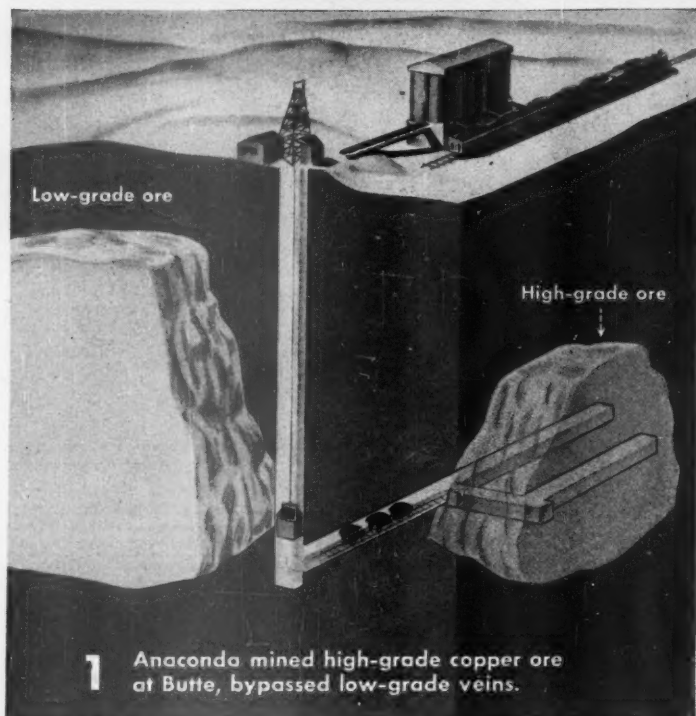
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Original equipment for all cars, trucks, buses and tractors—in fact, wherever shafts turn.

PRODUCTION



Anaconda Makes Low-Grade Copper Ore

Gravity and \$27-million will pay off with more copper for Anaconda Copper Mining Co. in Butte, Mont.

With its Greater Butte project, Anaconda is developing deposits containing more than 130-million tons of copper ore. But Anaconda won't use ordinary mining methods, blasting the ore out foot by foot with explosives. Instead, it will undercut the blocks of copper-bearing rock, then let them drop by to gravity hauling levels. Recovering around 20 lb. of metal from each ton of ore, Anaconda will eventually get 1.3-million tons of copper from the Butte project.

• **Nearly Year's Supply**—Although this copper from "the richest hill on earth" is nearly equivalent to the U.S. consumption for one year, Anaconda isn't blowing its horn about the project. The company soberly says that the program will only supplement and not replace its output from high-grade ores in the Butte area.

But even if the gain is slow to be realized, the Greater Butte project still represents a sizable chunk of copper. And today a loose pound of copper is

as scarce as an Indian-head penny. Industry this year will use over 1.5-million tons of the metal. One trouble is that 40% of our annual take comes from limited foreign imports. A project such as Anaconda's will mean a steady if not a lush supply to backstop the imports.

• **Takes the Leavings**—Anaconda's project is engineered to get the bypassed ores from mines that have been worked as high-grade deposits for the past 60 years. As the high-grade stuff was taken out of Butte Hill over the years, the working areas were filled with waste rock. Copper-bearing rock adjacent to the old workings—too low-grade to mine—was left behind.

The waste-filled areas, dubbed gofs by miners, and the pillars add up to a vast source of ore that assays at a little over 1% copper.

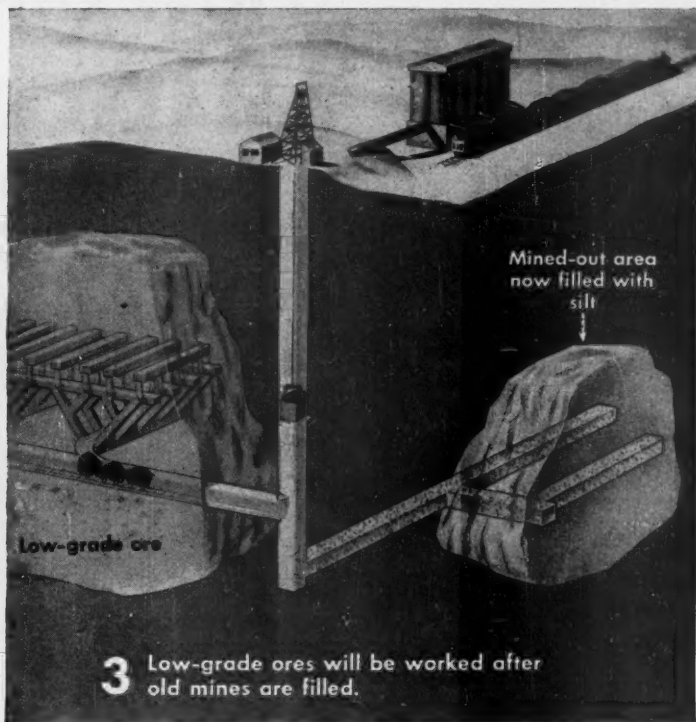
Using conventional mining methods, operations on such low-grade deposits wouldn't be economical. But Anaconda soon will begin mining by the gravity method that mining engineers call block-caving.

So far Anaconda's new operation has been running on schedule. Right now, it has done almost enough work on the hill to turn out about 5,000 tons of ore per day.

And the company plans to raise its daily output to 10,000 tons by the second half of next year and to 15,000 tons by the first half of 1953.

• **Block-Caving**—The block-caving that Anaconda will use to get out the low-grade ores has been tried before in other ore fields. But at Butte Anaconda is using block-caving as a complete mining operation, and at an unusually deep level.

In narrow-vein mines (and that includes most high-grade ores) and in firm rock that won't cave, the ore has to be blasted out a few cubic yards at a time. Block-caving turns out big tonnages of ore at a time; several ore blocks, each measuring more than 5-million cu. ft., are to be worked simultaneously in the Anaconda project. The technique requires fewer men and much less drilling and blasting. That's what brings costs down to the point where it's econom-



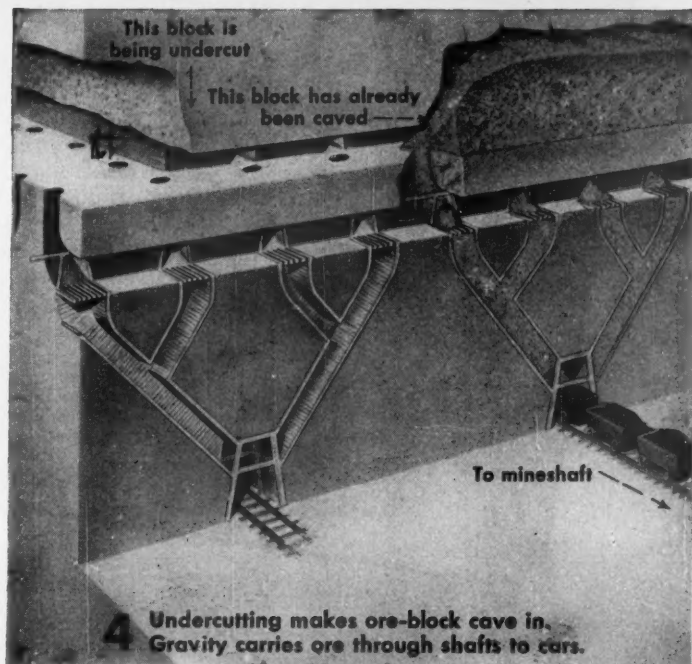
Pay Its Way

ically smart to dig out the low-grade ores.

• **Let Gravity Do It**—The economy of block-caving lies in letting gravity do most of the work. The masses of ore (see drawings) are undercut by a grid of tunnels. This leaves the block supported by pillars of rock. When these pillars between tunnels are blasted away, it literally pulls the props from under the ore block. The block crumbles, caves in.

Ore from the shattered block drops through a series of shafts called finger raises. At the next level down, it pours by gravity through "grizzlies," which are grates made of steel rails. The grizzlies screen out oversize chunks for later blasting or breaking apart. The ore flows down sloping passages to the mine cars on the haulage level.

• **Expanding Many Ways**—To get the ore up to the surface, Anaconda has had to sink a shaft that is probably the biggest in North America—38 ft. by 9 ft. in cross-section. Named after C. F. Kelley, Anaconda's board chairman, this shaft will first go down to 2,200





How an Engineer

46%

Fred Koenig's notes which were incorporated in his report to the Wagner Brewing Co., Columbus, Ohio, in Oct. 1951.

Cost of new power plant.....	\$128,000
Coal tonnage (old plant).....	8,420
Coal tonnage (new plant).....	4,700
Fuel costs (old plant).....	\$ 54,730
Fuel costs (new plant).....	\$ 32,000
Yearly savings on fuel.....	\$ 22,730
Labor costs (old plant).....	\$ 41,496
Labor costs (new plant).....	\$ 19,496
Reduction in present labor costs.....	\$ 22,000
Yearly savings.....	\$ 44,730

Amortization time,
new power plant—
2 years, 11 months.

Fred W. Koenig

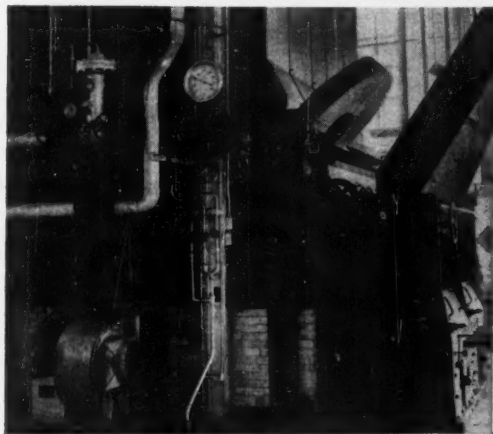
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FOR HIGH EFFICIENCY
FOR LOW COST

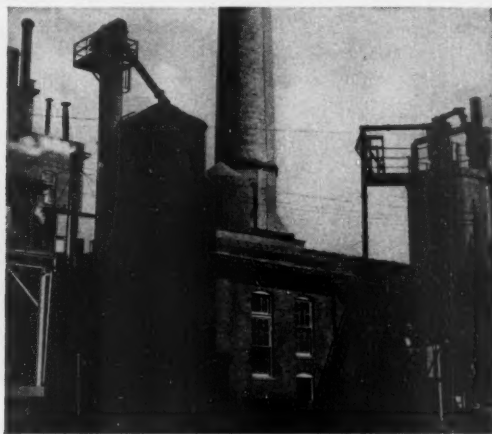
Slashed Operating Costs with coal!

IN FIRST YEAR OF OPERATION, NEW POWER PLANT EVEN BETTERS FRED'S ESTIMATE!

Fred Koenig calculated a saving of \$40,000. When the figures were in—after the first full year of operation—the saving actually amounted to \$44,730!



Here's the coal-fired installation that engineer Koenig recommended, after carefully considering gas and oil as fuels. Specifically designed to get the most energy from today's coals, it saved the Wagner Co. \$22,730 on fuel alone in the first year!



This large-capacity silo feeds coal automatically to the Wagner Company's power plant. It cuts handling costs—permits bulk buying of coal at lower rates—assures the Wagner Company of a steady, dependable source of power!

Today, bituminous coal, when used with modern equipment, is the most economical fuel for industrial use. Coal is now more efficient because it's *prepared* . . . washed and cleaned of all impurities. Modern, coal-fired equipment adds from 10% to 40% to the power obtained from the same amount of coal in years gone by.

And automatic controls, together with modern coal- and ash- handling apparatus, have dramatically reduced labor costs, done away with inconveniences—*making bituminous coal the best industrial fuel by far!*

America's coal mines are so productive that there will be no shortages to plague the companies that use coal as the source of their power . . . America's ample supply of coal is the best possible assurance that the price of coal will remain more stable than those of other fuels. Coal is always the safest fuel when it comes to both storage and use, factors of more than usual importance in these unsettled times.

BITUMINOUS COAL INSTITUTE

A Department of National Coal Association, Washington, D. C.

YOU CAN COUNT ON COAL!

**"200 copies by noon,
he says! It would take
5 people to do that!"**



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When you need multiple copies in a hurry — of important conference reports, sales letters, bulletins, price lists — use your duplicator. One typist can, literally, do the work not of five but of ten. And when she uses Hammermill Duplicator paper, only one typing, only one checking is necessary. Every copy will be clear, easy to read.

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Name _____

Position _____

(Please attach to, or write on, your business letterhead)

BW-11-24

LOOK FOR THE WATERMARK ... IT IS HAMMERMILL'S WORD OF HONOR TO THE PUBLIC

ft., and ultimately to 4,200 ft. In the mine, railroad-sized tunnels will branch off from the shaft to the work areas.

To take care of increased ore production, Anaconda will increase the capacity of its underground equipment by almost half. That means bigger mine cars, locomotives, and shaft skips. The boost in handling capacity will indirectly help to cut the operating costs.

To get a process for treating this new ore, Anaconda started laboratory tests as early as 1943. The ore from the Great Butte project couldn't be treated by standard methods because it differs metallurgically from most ores. After testing many different processes, Anaconda settled on the process now being installed at its ore concentrator.

Reactor For Sale

**AEC is offering industry
a low-power nuclear reactor;
it's simple to run, should have
many civilian uses.**

A spare \$1-million-plus Atomic Energy Commission approval—will get you a low-power nuclear reactor for producing radioisotopes, training scientists, or researching atomic energy. Designs for such a machine were just completed by North American Aviation, Inc., under an AEC contract.

This reactor, in which energy from uranium is released at a controlled rate, is not a production pile for making fissionable material, like the one at Hanford, Wash. Nor is it intended as a nuclear powerplant for generating electrical energy, as the ones General Electric, Westinghouse, and others are working on. They will have to operate at many times the power of this 160-kw. machine.

• **Compromise**—NAA says its design is the kind that private industry or research institutions would want to build for making their own radioisotopes or studying reactor technology.

It's about one-third to one-fourth the size of the Brookhaven reactor and generates 10 to 20 times more neutrons than the "baby" reactor being built at the University of North Carolina.

What AEC was aiming for in this case was a reactor that was powerful enough so that its nuclear material would not be used up in one experiment, yet compact enough so that people could get around it to do some work. The uranium charge fed into the NAA machine—consisting of uranium 238 metal enriched in uranium 235—will last 10 years before it has to be replaced.

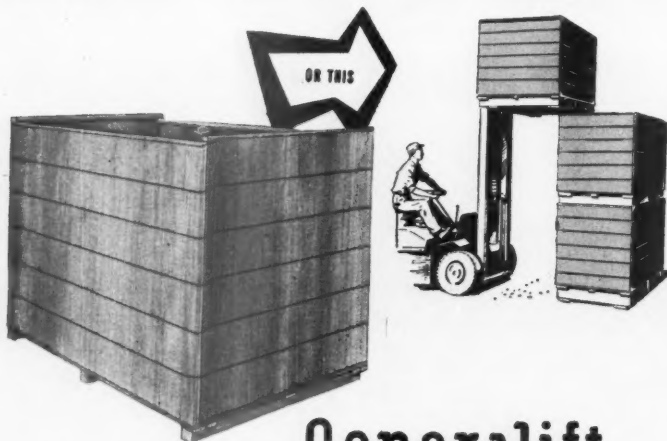
• **No White Elephant**—Beauty of the machine is that it's simple, would re-

(Advertisement)

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go out and buy
Woman's Day**

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*3,865,000 average single-copy sales per issue
...the world's largest single-copy circulation...on sale at all A & P stores.



Generalift

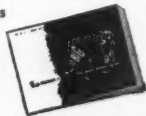
pallet boxes

- 1 CUT MATERIALS HANDLING COSTS
- 2 SHARPLY REDUCE STORAGE COSTS

More and more cost-minded manufacturers—the country over—are saving with Generalift Pallet Boxes. These versatile containers sharply reduce costs wherever materials are handled or stored. Remember, Generalift Pallet Boxes and fork-lift truck do the work of many employees. And remember also to write us for complete information. Why not do it NOW?

WE WILL MAIL FREE COPY OF "THE GENERAL BOX"

This colorful booklet illustrates and describes the many advantages of the Generalift Pallet Box. We will be glad to mail upon request.



ALL TYPES OF
ENGINEERED SHIPPING CONTAINERS

DISTRICT OFFICES AND PLANTS:

Cincinnati, Danville, N. J., Detroit, East
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Corrugated
Container



General
All-Bound
Box



Generalift
Pallet and
Pallet
Box



General
Watkins-
Type
Box

quire just one operator to run it (and not too highly trained a man). One nuclear physicist in the East said that running this reactor would be almost as easy as operating a radio set.

It would do a real job for, say, West Coast industrial and research groups who would want to work with short half-life isotopes, such as sodium 24, which loses half its radioactivity in 14.7 hr. Normally, the stuff would have to come from Oak Ridge, Tenn., or Brookhaven, New York. Time needed for packing it, plus a 2,000- or 3,000-mile airplane flight, would make it useless. There are some 40 such short-lived isotopes that are potentially important to West Coast industry. But a reactor that could produce such materials in, say, Los Angeles or San Francisco would make the use of them feasible.

Isotope production is just one use this reactor could be put to. A beam of neutrons might be directed out of the reactor for medical research, such as cancer treatment. And it could help develop data for building large power-generating reactors.

• **The Statistics**—Only about one-third of the \$1-million to build this machine is needed for its working parts. The other two-thirds would go toward shielding and safety equipment to protect the people working with it. This cost doesn't include the uranium fuel, which will have to be rented from AEC.

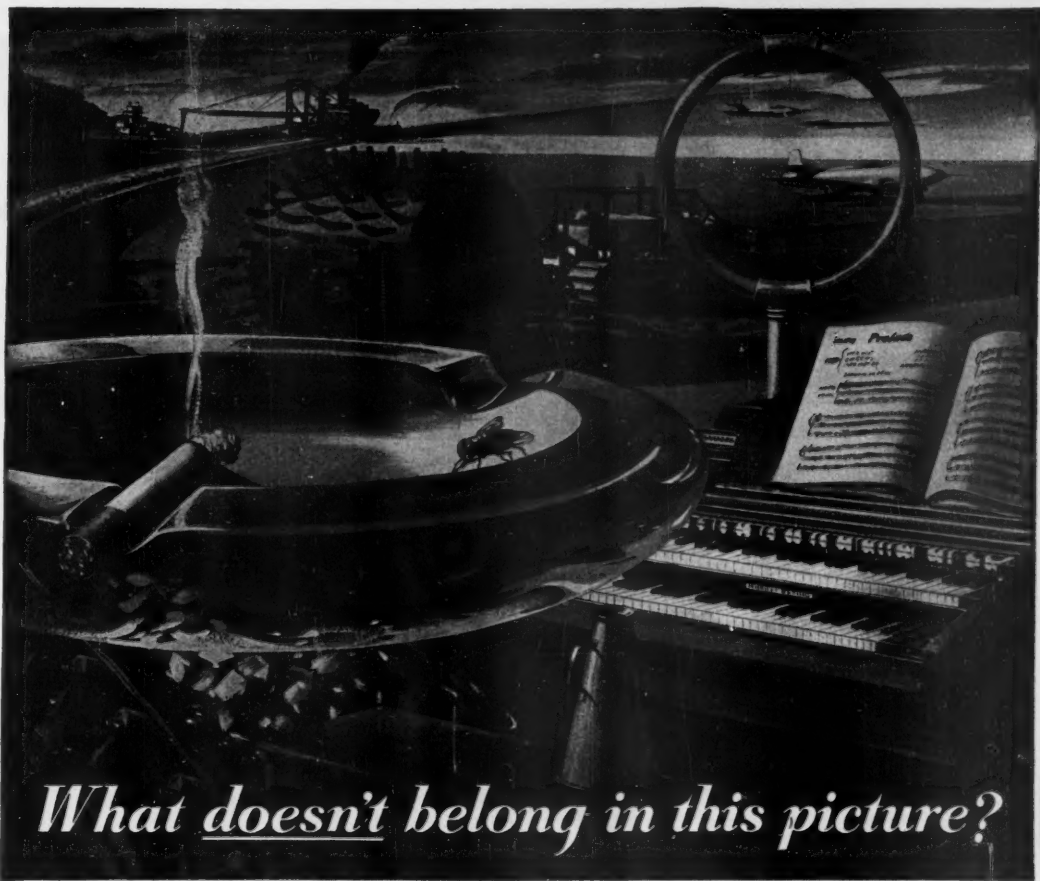
NAA's blueprints show that the reactor is octagon-shaped, stands 11 ft. high, 19 ft. wide, and weighs about 450 tons.

PRODUCTION BRIEFS

Military unification: Interchangeable gasoline engine parts are close at hand. An industry advisory group for the Munitions Board has come up with a plan for standardizing high-mortality parts of gasoline powerplants used by the Army, Navy, and Air Force. It would reduce the 1,187 different moving parts of 138 different engine models to only 63 parts. And 15 bore sizes could be reduced to five.

Latest foreign machine tools offered in this country include Western German machines available from Kurt Orban Co., Inc., New York. In the line are sectionalized T-lathes for turning or facing work, a slot milling and keyseating machine, and a twist drill grinder.

Aluminum replaces brass in the bases for incandescent light bulbs produced by General Electric Co. One reason is to conserve scarcer brass. But aluminum also resists tarnishing better, costs slightly less, and has better electrical characteristics, GE says.



What doesn't belong in this picture?

All but one of the objects in this picture have something in common — Norton or Behr-Manning abrasive products are vital factors in their manufacture and in their quality. *Can you find the stranger?*

The sheepfoot roller? No! Before it went to work compacting and leveling airstrips, it got its rugged strength and odd shape from processes that call for the top performance of Norton grinding wheels and refractories and Behr-Manning coated abrasives.

The organ? No! The rich finish of its woodwork comes from coated abrasive paper for which Behr-Manning is famous. Its smooth tones come from precision parts that result from the uniform grinding action of Norton and Behr-Manning products.

The ash tray? No! The entire glass industry relies on Norton and Behr-Manning abrasive products for many grinding and cutting operations.

The cigarette? No! Norton and Behr-Manning abrasives contribute in many ways to smoking enjoyment. For example, the circular blades that cut cigarettes cleanly to size are continuously sharpened by Behr-Manning abrasive discs.

The stranger in the picture is the fly. Remember, any man-made product . . . whether of metal, wood, paper, cloth, leather, ceramics or plastics . . . depends in some important way on abrasives, abrasive products, refractories or grinding machines that bear such well-known trade-marks as Norton and Behr-Manning . . . the world's largest manufacturers of abrasives and abrasive products.



Making better products to make other products better



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ABRASIVES • GRINDING WHEELS • REFRACTORIES
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BEHR-MANNING

DIVISION OF NORTON COMPANY TROY, NEW YORK

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● **The Crestwood** Three bedroom home for more and better living designed by Schwarz and West—A.I.A.



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Inflation won't change the cost of the Peaseway Home after it leaves the factory—the materials are all incorporated, and you can erect it in a matter of weeks—thus insuring your profit margin, as well as producing satisfied customers. Be the Peaseway Franchise Builder-Erector in your area and take advantage of one of the best opportunities ever offered in the building industry! Peaseway "New Design" Homes are the FIRST prefabricated CONTEMPORARY DESIGN Homes in America—planned by outstanding architects, engineered for the most efficient, durable construction. They mark the beginning of a new era in fine home building. Our Peaseway Plan tells you how these fast-selling homes can be yours to build on a franchise basis in your territory. It tells you, too, about the complete line of Peaseway Homes you can offer—ranging from a traditional design 2-bedroom home of 691 square feet to The Archwood CONTEMPORARY DESIGN Home of 1410 square feet containing 4 bedrooms and 2 baths. Prices from \$7,000 up. F.H.A. accepted.

We urge you to write at your earliest convenience... just a few lines on your letterhead asking for the Peaseway Plan.

Peaseway
Homes

... Best in Home Building

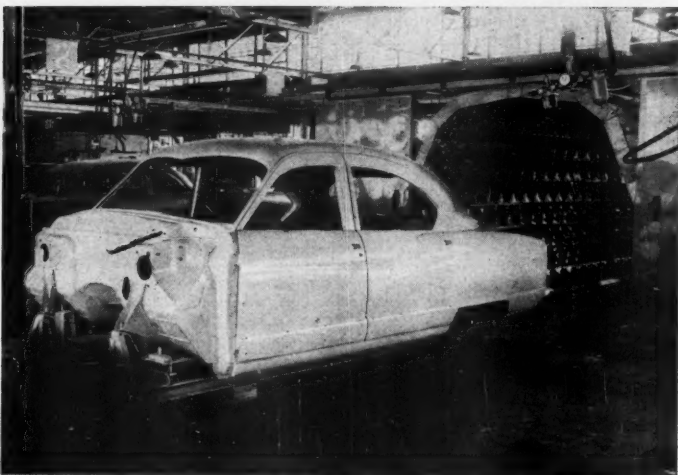


WRITE TO:
PEASE WOODWORK COMPANY
ROOM 1104
CINCINNATI 23, OHIO

"In business in Cincinnati since 1893"



Hot Lacquer Sprayed on Pianos . . .



. . . and Autos Speeds Production

Manufacturers are putting the heat on lacquer to make it a better finishing material (BW—Dec. 3 '49, p64).

On its finishing line, Rudolph Wurlitzer Co., DeKalb, Ill., heats lacquer before spraying it onto its pianos and stands. Some in the auto industry have also given hot lacquer a try. Kaiser-Frazer uses the process in its foreign and some of its domestic assembly plants. Ford and General Motors are experimenting with it on one-color setups, which will go on the production line if they are economical.

• **Advantages**—Reasons for the shift to hot lacquer in the two industries are

pretty much the same. To get a final finish of a given thickness, hot lacquer needs fewer individual coatings on a work piece than if it were sprayed on cold. And the fewer the passes, the faster the work can be turned out.

In some cases the drying ovens needed for enamel can be eliminated when a paint line is switched to hot lacquer. Most users agree, though, that the equipment for hot lacquer is more expensive than that for cold spraying. And it isn't easily adapted to more than one color.

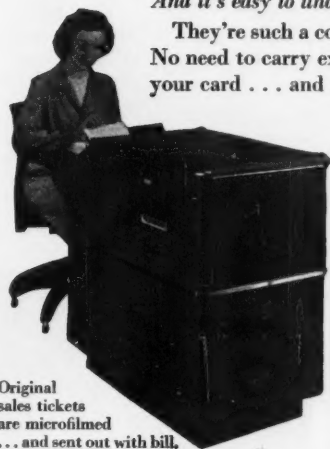
Lacquer alone is a heavy, viscose coating. To get it thin enough to use in a

Another example of the way low-cost Recordak microfilming is increasing efficiency for 65 different types of business . . . thousands of concerns

Making a good idea...

Credit cards build repeat business for the oil companies who issue them. And it's easy to understand why—

They're such a convenience for the motorist—when touring, especially. No need to carry extra cash—just pull into any company station . . . show your card . . . and sign the carbon-type sales ticket.



Original sales tickets are microfilmed . . . and sent out with bill.

...work better

While the credit-card system is a "business natural" . . . it necessarily increases home-office costs—dealers must be supplied with sales books . . . customers must be billed . . . records must be kept.

But, today, leading oil companies are cutting these costs—and realizing greater profits—with Recordak microfilming.

A photograph costs less than an extra carbon copy
Recordak microfilming enables the oil companies to save money on their sales books—only three tickets are needed now—

One carbon copy goes to the customer when he makes his purchase; the other is kept by the dealer; and the original handwritten record is forwarded to the oil company . . . where it is microfilmed. Then, it is sent out to the customer with the bill—which is merely the total figure of the enclosed tickets.

Thus, Recordak microfilming eliminates the extra carbon copies which formerly were incorporated in sales books to provide the permanent home-office records—and which actually cost more than the microfilm copies.

And here is how costs are cut further: Clerks no longer handle two paper records for every purchase made in the field—which saves hours every day. Also, protection is greatly increased, for the photographically accurate and complete Recordak microfilm records won't smudge . . .

and can't be altered without detection. And, they can be filed in just 1% of the space previously required—ready for immediate review in a Recordak Film Reader.

It will pay you to write for a free copy of "50 Billion Records Can't Be Wrong." It gives outlines of varied systems' short cuts made possible by Recordak microfilming—also details on the complete line of Recordak

Microfilmmers now offered on an attractive purchase or rental basis. Recordak Corporation (Subsidiary of Eastman Kodak Company), 444 Madison Avenue, New York 22, N. Y.

"Recordak" is a trade-mark



RECORDAK

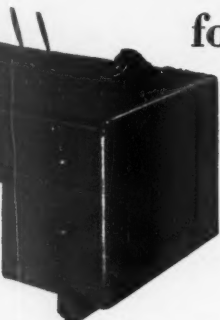
(Subsidiary of Eastman Kodak Company)

originator of modern microfilming—
and its application to business systems

Customer merely signs sales ticket . . . no delay.



This Desk was built for *YOU!*



And in a sense, *by you*, for we asked a thousand busy executives like yourself just what they wanted in a desk—and this handsome Steel Age Executive Desk is the result. It has everything you asked for... a smooth, eye-easy corroleum top... man-sized drawers that float open at your touch... and adjustable gliders that provide the best working height for your physique. And, thanks to its modern design and sturdy construction, your Steel Age Desk will *still* be the prized possession of your office many years from now.

Why not see it at your Steel Age dealer's today? He may be able to deliver your desk much sooner than you think.

Corry-Jamestown Manufacturing Corp.
Corry, Penna.



At Leading Office Furniture Dealers from Coast-to-Coast



NEW METHOD →

Frost now uses a viscous liquid resin-oil dispersion which is pumped into vat with a Viking pumping unit shown mounted on a portable wagon.

← OLD METHOD

Processing varnish at Frost Paint & Oil Corporation, Minneapolis, formerly required cutting open drums, chopping hard resin and shoveling into vat.



VARNISH HANDLING SIMPLIFIED

By Improved Method Using Viking Rotary Pumps

If your plant has a product handling problem and there's a chance of pumping it, you can probably save time and money. The Frost varnish plant is an example. Their new, handy method of pumping resin-oil into the processing vat is safe, clean and controlled. (See man in foreground, new method.) It replaces the former job of chopping and shoveling hard resin. (See old method). Send for free Viking folder series 51 and ask for the answer to your pumping problem.



VIKING PUMP COMPANY
CEDAR FALLS, IOWA

THE ORIGINAL "GEAR-WITHIN-A-GEAR" ROTARY PUMP

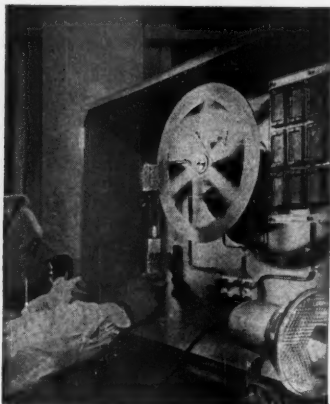
spray gun, it is normally mixed with a solvent. But at Wurlitzer and other users of the process, heat, besides the solvent, helps to thin out the lacquer. Spraying at 160F cuts the solvent content by one third, increases the coverage on a work piece by about 50%.

• **Speedup**—Before its change, Wurlitzer's finishing department put out 160 pianos in a 12-hour day; by using hot lacquer, it finishes the same number in an eight-hour shift. On its benches, Wurlitzer once used five individual coatings of lacquer; now it uses only one cold coating, and two of hot lacquer.

Since the switch, Wurlitzer's rejects have been fewer. And materials handling and storage are no longer a problem, because the new method has speeded up production, moves the pianos out of the plant faster.

• **War Baby**—Hot lacquer came into its own during World War II when Army Ordnance used it on armament parts. Now Ordnance has set up new specifications for hot lacquer, based on materials that have been improved since the war.

The specifications were set up with an eye toward using hot lacquer on bigger components—such as tanks, automotive equipment, and artillery guns. Although Ordnance hasn't yet required hot lacquer in any of its contracts, contractors have an official O.K. to use it as a special primer or top coating.



Candlelight Runs Motor

Candlelight, like sunlight, can be converted into enough electrical energy to spin a light flywheel. This is the "sun motor," which General Motors Corp. is trotting around the country to show that the sun is nature's greatest power reservoir. Although the motor is a pretty inefficient power producer, it does prove the point. Light falling on a series of photovoltaic cells causes a chemical reaction. This induces flow of direct current electricity to the motor.



Billion dollar "dream"

Just 27 years ago Armco engineers came up with an idea that has saved steel users billions of dollars. It was the continuous mill for rolling steel sheets, and it made the slow, costly, back-breaking hand mill obsolete overnight.

Called one of the world's great inventions, the new method produced thin sheets by passing thick slabs of steel through stand after stand of giant rolls. In the interests of the steel industry and the public, Armco shared this revolutionary method by licensing it to other steel companies.

Last year the steel mills of America turned out 25 million tons of steel sheets and strip. Rolled on

hand mills, this immense tonnage would have cost manufacturers an *additional billion dollars*.

The continuous mill is one big reason why plain steel can still be bought for a nickel a pound. But this Armco invention does more than cut costs; it makes more uniform steels — sheets that enable the manufacturer to build better, longer-lasting industrial and consumer products.

MORE SCRAP FOR MORE STEEL

More steel scrap is needed for top steel production. The new furnaces the steel industry is building cannot be operated at capacity with the present scrap supply. To help the nation — and yourself — sell your steel scrap now!

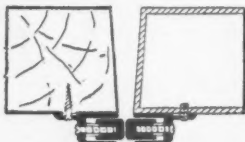
ARMCO STEEL CORPORATION

MIDDLETOWN, OHIO, WITH PLANTS AND SALES OFFICES FROM COAST TO COAST
THE ARMCO INTERNATIONAL CORPORATION, WORLD-WIDE

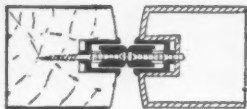


MICHAELS *adjustable* ASTRAGALS

KEEP DOORS CLOSED . . . help to eliminate drafts and air currents, and to keep out dirt and dust. Astragals are made of bronze, aluminum or nickel, and are available in several styles. They are simple, practical, sturdy, easily installed and adjusted. Here are two of the most popular types.



Type "A" may be applied to either wood or hollow metal bevel doors. May also be used as a stop head.



Type "E" is designed for bullnose hollow metal or wood double acting doors. Both types may be used at the bottom of doors.

Another important advantage of Michaels Adjustable Astragals is that they compensate for the expansion and contraction of doors. Write for folder illustrating the complete line. Michaels manufactures many non-ferrous metal building products. So whatever you need, if it's made of non-ferrous metal, write us.

MICHAELS PRODUCTS

Bank Screens and Partitions	
Welded Bronze Doors	Elevator Doors
Store Fronts	Lettering
Check Desks (standing and wall)	
Lamp Standards	Marquises
Tablets and Signs	Name Plates
Astragals (adjustable)	
Stair Railings (cast and wrought)	
Wrought and Cast Radiator Grilles	
Grilles and Wickets	
Kick and Push Plates	Push Bars
Cast Thresholds	Extruded Thresholds
MI-CO Parking Meters	
Museum Trophy Cases	

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232 Scott Street, Covington, Kentucky

Manufacturers since 1870 of many products in Bronze, Aluminum and other metals

NEW PRODUCTS



OIL-COVERED RIVER was a fire hazard until Essential Chemicals laundered it.

Detergent's New Use: Fire Prevention

Three weeks ago the Milwaukee firemen were scared stiff, and they had good reason to be.

An oil storage tank on the bank of the Milwaukee River ruptured, and 70,000 gal. of oil flowed into the river. In the backwashes and eddies the oil spread up to 6 in. thick over the water. The whole river became a fire hazard—likely to go off at the drop of a match or a flying spark.

Then the Essential Chemicals Co., Milwaukee makers of detergents, came up with a bright idea. It offered to launder the river.

• **Emulsifier**—Essential Chemicals Co.'s chemists knew that their detergent "Soapthetic," which they had been making for five years, had emulsifying properties. Experiments proved that the detergent, "boosted up" and sprayed on the oil, changed the sticky petroleum into a creamy, nonvolatile emulsion. (In effect, oil molecules were being held in suspension by the chemical.) So the chemists and the fire department went to work.

First they laid down a log boom across the river to hold back the down-

flow of oil. Then, using a clever bypassing method that brought the mixture to the fire hose nozzle fully dissolved, they doused the river with 1,500 lb. of the detergent. In a couple of hours, the oil hazard was licked, and the emulsion floated harmlessly down the river.

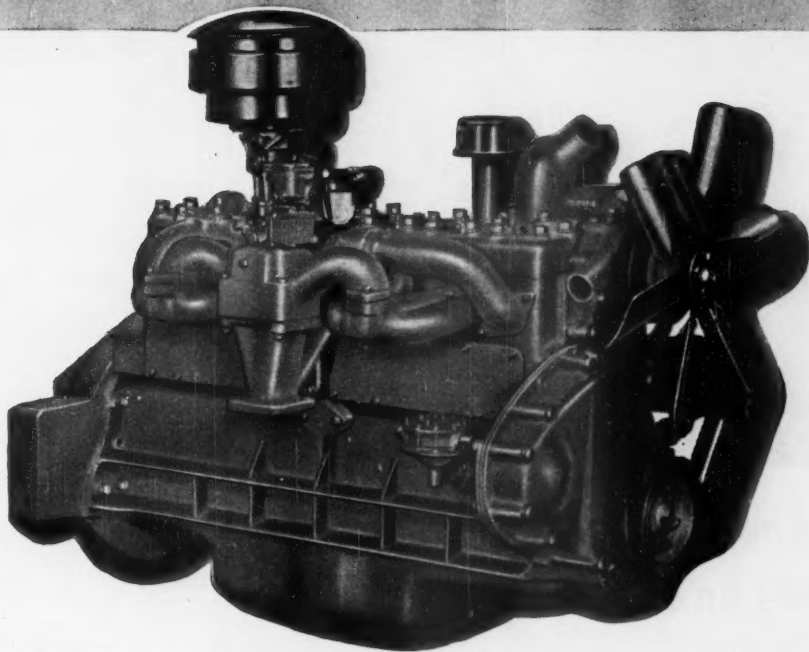
Two days later Soapthetic was again used to neutralize 2,000 gal. of high octane spilled in the streets by an overturned gas truck. The Essential Chemicals Co., quick to latch onto a good idea, jumped into action.

• **Quick Switch**—The firm changed the name of the boosted detergent to PREV (short for preventive) and launched a campaign to sell the product.

It posted the Army that PREV would be a good thing to have around in case of bombings of fuel dumps. With the help of the Milwaukee Fire Dept., it contacted other fire departments throughout the country and also planned for bulk sales to petroleum industry points on rivers and harbors where oil on water is a frequent fire hazard. Selling point: Even though PREV

LET'S FACE FACTS

about Industrial Engines



CHRYSLER HAS LOWER FIRST COST

Chrysler quantity production methods have been adapted to specialized industrial engine building. As a result, you get a custom-built engine at mass-production price levels. A Chrysler engine costs less than many other engines, yet it's still a special engine designed and engineered for a special job.

CHRYSLER HAS LOWER MAINTENANCE COSTS

Simplified, clean construction makes field repair easier, faster, less expensive. Famous Chrysler engineering achievements like Superfinished Wear Surfaces, dynamically balanced shafts and Chrysler-developed steels and alloys produce parts less subject to wear—more hours of uninterrupted service.

CHRYSLER HAS SMOOTHER OPERATION

Because Chrysler Industrial Engines are high speed, high compression engines, they offer smooth running power under extreme loads. Scientifically designed combustion chambers extract the maximum power from fuels. No stalling. No bucking. No killing the engine. Full power range is instantly available.

CHRYSLER HAS PARTS AND SERVICE AVAILABILITY

Chrysler will keep you operating with a minimum of downtime. Chrysler Parts and Service are always available! Again quantity production and standardization keeps strategically located depots and Chrysler Industrial Engine Dealers supplied with complete stocks of parts for immediate delivery.

See your local Chrysler Industrial Engine Dealer, or write:
Industrial Engine Division, Chrysler Corporation, Detroit 31, Michigan.

CHRYSLER
Industrial Engines
and Power Units

HORSEPOWER WITH A PEDIGREE





Look at the jet's finish for ideas on conserving manpower

You can find powerful production help in jet engine precision manufacturing methods. For example:

Cleaning and finishing of parts have been put on a highly efficient, top-quality basis with power brushing. At many steps in the production of blades, rotors, gears and other parts, machining blemishes and imperfections are removed and surfaces smoothed by Osborn Power Brushes. Brushing is highly mechanized . . . practically automatic with push-button simplicity. Skilled manpower normally required is conserved for other work. Extreme precision is assured on every piece at high output rates.

Are you taking advantage of the power of new Osborn brushing methods to multiply manpower and cut costs? Have your **Osborn Brushing Analyst** study your cleaning and finishing operations and recommend improvements. Call now or write *The Osborn Manufacturing Company, Dept. 561, 5401 Hamilton Avenue, Cleveland 14, Ohio.*



**LOOK FOR THE NAME OSBORN . . . RECOGNIZED EVERYWHERE FOR
QUALITY WORKMANSHIP AND MATERIALS**

won't put out a fire once it has started, it will neutralize the inflammability before the fire has a chance to start.



Quick Well Digger

One man can dig a water well in 2½ hours. At least Mobile Drilling, Inc., says that last month one man, using its rig, sank a 61-ft. well, lined it with casing, connected the pump, and had water flowing—all in that time.

The first step is the drilling (picture). Augers, in 5-ft. lengths, are coupled together as they dig downward. When the desired depth is reached, the augers are removed, and the water screen starts down the hole.

After the screen, and coupled to it, comes plastic well casing. A quick-setting plastic-weld cement permanently "glues" the lengths of casing together. A drilling stem, run down inside the casing, whirls "built-in" cutting teeth on the bottom of the screen, and so the whole business pulls itself down the well. When the water level is reached, you take out the drill stem, drop down plastic pipe, attach the pump to it, and the job is done.

- Source: Mobile Drilling, Inc., N. Pennsylvania St., Indianapolis, Ind.
- Price: \$2,500.

Diet Trimming

For years doctors have been seeking an efficient but safe appetite-killer for overweight patients. Wyeth, Inc., thinks it has the answer in a new formula.

Wyeth combines amphetamine, the new appetite-killer that has been coming into use recently, with a package of vitamins intended to offset any deficiencies that may arise out of a reduced diet. Its product is a lozenge, available by prescription only, called Adjudget.

When you take an Adjudget just be-



speaking of people "ON THE WAY UP"

They're the ones who always seem to do twice as much in half the time. These are the kind of people who are taking advantage of the speed, comfort and economy of air travel.

Let us help you "go places" in a comfortable hurry.

Capital
AIRLINES

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CLARK Service

BY MEN WHO KNOW BEST

FROM YOUR MATERIALS HANDLING EQUIPMENT

There are two fundamental reasons why CLARK fork-lift trucks, powered hand trucks and industrial towing tractors exceed user expectations:

1. They are better-built—built for long years of usefulness, for easy maintenance and low-cost operation.
2. Clark—and Clark alone—provides a complete, border-to-border and coast-to-coast maintenance and repair service designed to keep your equipment on the job.

Clark's reliable service protects your investment by keeping your materials-handling equipment on the job at top operating capacity. This is the priceless *plus* you get with every Clark purchase.





...coast-to-coast

HOW TO GIVE YOU THE MOST

What You Need When You Need It!

You have no time for fooling around—no stomach for "lip" service, nor "lick-and-promise" service in this day and age. Your machines must be kept rolling if you are to operate at a profit. Clark gives you "work-or-else" service—nothing less—by skilled and genuinely interested mechanics. You get what you need, when you need it.

Every service station stocks genuine Clark parts. And behind these stations is Clark factory service which fills 98% of emergency orders in less than 48 hours! We know of no other materials-handling service that can approach this record—this program.

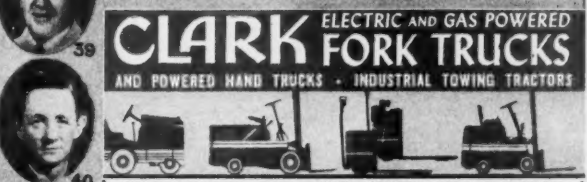
Clark fork-lift trucks, powered hand trucks and industrial towing tractors solve your materials-handling problems. And Clark's unrivalled service keeps 'em rolling. Clark machines and Clark service are an unbeatable team that plays only for your profit:

THESE MEN HEAD UP CLARK'S INCOMPARABLE SERVICE

- | | |
|--|--|
| 1—JESS PULVER
ALBANY, NEW YORK
*Industrial Truck Sales, Inc. | 12—LYLE SCHMIDT
DAVENPORT, IOWA
The All-Wheel Drive Company |
| 2—CHARLES P. KOERBER
BALTIMORE 2, MARYLAND
*Fallway Spring & Equipment Co. | 13—P. N. MAHR
DENVER 4, COLORADO
Fork Lift Truck Service Company |
| 3—ED RONNING
BIRMINGHAM, ALABAMA
*M.H. Equipment Company | 14—CHARLES D. REES
DETROIT 13, MICHIGAN
Industrial Truck Service, Inc. |
| 4—WOODROW L. KURTZ
BOSTON, MASSACHUSETTS
*Brodie Industrial Trucks, Inc. | 15—MARTIN PETERS
FARGO, NORTH DAKOTA
*Sweeney Brothers Tractor Co. |
| 5—JOHN VACANTI
BUFFALO, NEW YORK
*Brodie Industrial Trucks, Inc. | 16—HAROLD HOAG
FRESNO, CALIFORNIA
*Robert H. Braun Company |
| 6—ROBERT G. GOERS
CHICAGO 21, ILLINOIS
Lift Truck Service Company | 17—RALPH B. (Red) TAYLOR
GRAND RAPIDS, MICHIGAN
Industrial Truck Service, Inc. |
| 7—CHARLES MUMMERT
CINCINNATI 9, OHIO
*Robert C. Young & Company | 18—A. H. VANHOY
GREENSBORO, NORTH CAROLINA
*Industrial Truck Sales & Service Co. |
| 8—JOE CAMERIERI
CLEVELAND 11, OHIO
*Material Handling Equipment Corp. | 19—JOE CITAK
HARRISBURG, PENNSYLVANIA
*Brodie Industrial Trucks, Inc. |
| 9—FRED ROSEBOOM
COLUMBUS, OHIO
*Edward J. Sherry Co. | 20—GEORGE OGATA
HONOLULU, T. H.
*Pressed Steel Car Company |
| 10—JIMMY CLARKSON
COLUMBIA, SOUTH CAROLINA
*M.H. Equipment Company | 21—HARRY DARE
HOUSTON 2, TEXAS
Industrial Truck Service Co. |
| 11—THOMAS RICHARDSON
DALLAS, TEXAS
Industrial Truck Service Co. | 22—PAUL G. PILKINTON
INDIANAPOLIS 5, INDIANA
*W. A. Marschke & Sons, Inc. |

*Sales and Service

- | | |
|--|---|
| 23—E. T. MARKS
JACKSONVILLE, FLORIDA
Forsyth Garage | 35—LOUIS FRIEDBERGER
PHILADELPHIA 44, PENNSYLVANIA
Philadelphia Engine Rebuilders, Inc. |
| 24—IRL T. OLIVER
KANSAS CITY 8, MISSOURI
*Lift Truck Sales & Service, Inc. | 36—LLOYD BROWN
PHOENIX, ARIZONA
*Robert H. Braun Company |
| 25—FAYE HIGGINS
LOS ANGELES 22, CALIFORNIA
*Robert H. Braun Company | 37—JOHN VILSACK
PITTSBURGH 33, PENNSYLVANIA
*Material Handling, Inc. |
| 26—C. L. WALDEN
MIAMI, FLORIDA
Walden's Garage | 38—BOB TILMAN
ST. LOUIS, MISSOURI
*Industrial Truck Service Inc. |
| 27—R. G. BUCHIGNANI
MEMPHIS 3, TENNESSEE
*Fred J. Vandemark Company | 39—JACK B. YOUNG
SEATTLE 1, WASHINGTON
*Preston Fuller Company |
| 28—WALTER REPINSKI
MILWAUKEE 10, WISCONSIN
*Wisconsin Industrial Truck Co., Inc. | 40—RAY WILSON
SIOUX FALLS, SOUTH DAKOTA
*Stan Houston Equipment Co., Inc. |
| 29—EDWARD F. BALL
MINNEAPOLIS 7, MINNESOTA
*Material Handling Engineers, Inc. | 41—BILL TYE
SOUTH BEND 14, INDIANA
*Materials Handling Equipment Corp. |
| 30—HENRY BOUDRIAS
MONTREAL 9, QUEBEC
*J. H. Ryder Machinery Co., Reg. | 42—L. W. ELLZEY
TAMPA, FLORIDA
J. B. Hardin Hardware, Inc. |
| 31—JOHN D. LANKTON
NEW HAVEN 15, CONNECTICUT
*C. E. Reutter Corporation | 43—L. S. (JIM) WILLIAMS
TOLEDO, OHIO
*Kern Truck Sales, Inc. |
| 32—A. (ARCHIE) McGUFF
NEW YORK 14, NEW YORK
*Bond Industrial Maintenance Co., Inc. | 44—J. JENNER
TORONTO 5, ONTARIO
J. H. Ryder Machinery Co., Ltd. |
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*McClean Equipment, Inc. | 45—J. G. MCCRAY
TULSA 3, OKLAHOMA
Midwestern Engine and Equipment Company, Inc. |
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CLARK FORK TRUCKS

ELECTRIC AND GAS POWERED
AND POWERED HAND TRUCKS - INDUSTRIAL TOWING TRACTORS



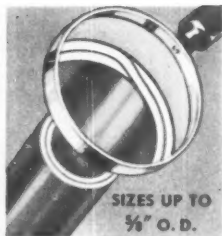
INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 42, MICHIGAN
Please send me the new "Time and Place Utility" issue of Material Handling News.

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Street _____
City _____ Zone _____ State _____

AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS



Let's talk turkey about tubing ...double-walled Bundyweld!



Bundyweld Tubing is double-walled from a single strip. Exclusive, patented beveled edge affords smoother joint, absence of bead, less chance for any leakage.

No other small-diameter tubing offers all the features of famous Bundyweld. For no other tubing is like it.

This multiple-walled type of Bundy® tubing is double-rolled from a single strip of steel, and copper-bonded throughout 360° of wall contact. Bundyweld is extra-sturdy, easy to fabricate, highly resistant

to vibration fatigue or stress in rugged, gruelling spots.

Behind the Bundyweld features are superlative skills and services that only the world's largest producer of small-diameter tubing can provide in the design and fabrication of tubing parts. Why not call Bundy Tubing Company today?

Bundy Tubing Company

DETROIT 14, MICHIGAN

WORLD'S LARGEST PRODUCER OF SMALL-DIAMETER TUBING • AFFILIATED PLANTS IN ENGLAND, FRANCE AND GERMANY

fore mealtime, your appetite is supposed to diminish. However, you still get the vitamins that you might otherwise lose cutting down on food. Wyeth says you reduce your average food intake of 3,500 calories to 1,500 calories. The candy-like stuff is loaded with vitamins: A, B1, B2, B6, C, and D2.

The amphetamine itself does four things: (1) It reduces desire for food; (2) produces a calorie-consuming increase in metabolism; (3) gives a feeling of well-being, and (4) stimulates increased physical activity.

• Source: Wyeth, Inc., Philadelphia, Pa.

For X-Ray Diagnosis

Diagnosing industrial X-ray pictures is a tough job, particularly when you're studying an object of varying thicknesses. Usually, you have to work with several exposures of the same object. General Electric says its High Intensity Illuminator licks this problem.

The illuminator has two features that should make it easy to study a wide range of densities in the same X-ray: (1) a 100,000 candlepower lamp (which lasts for 1,000 hours); and (2) a light opening that you can dilate from a 1/4-in. to a 5-in. opening. This means you concentrate the light on either a small area of the X-ray or over a wide area. Thus you can study various thicknesses of an object in the same exposure, instead of taking several exposures. GE says this intense light will even penetrate over-exposed film.

• Source: General Electric Co., Milwaukee, Wis.

• Price: \$175.

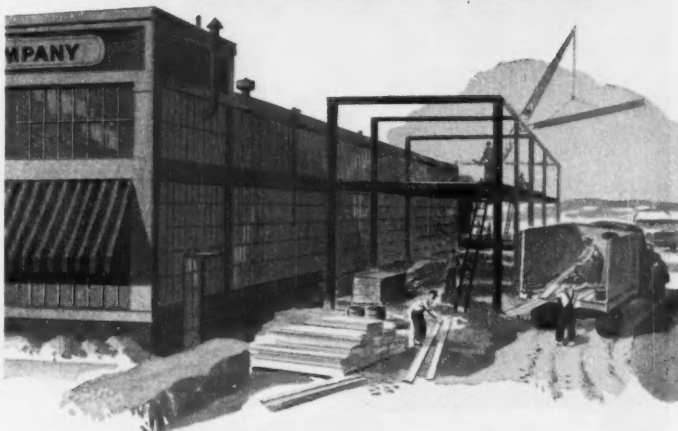
NEW PRODUCTS BRIEFS

A white enamel paint that is really flat is made by du Pont. Called Dulux, the paint, like all enamels, is smudge resistant, washable, and yet gives a smooth surface with no side sheen.

A snow blower, that clears a ton of snow per minute comes from Toro Mfg. Corp. of Minneapolis. The hand-run blower throws snow 65 ft. in any direction, has six forward and two reverse speeds, with separate clutches for the wheels so you can easily turn in tight spots.

Fluorescent lights installed at the end of the press bed of Thunder Bay presses will cut out die breakage. Thunder Bay Mfg. Corp., Alpena, Mich., says the operator of the press can see his work at all times and thus eliminate mishaps before they occur.

Planning TO EXPAND PRODUCTION?



For new or old buildings get
additional heating

Quickly, economically!



Janitrol offers the largest line of Unit Heaters for all types of gas, including suspended models, propeller or blower fan equipped, floor models, 30 sizes and types of units with capacities from 50,000 to 1,500,000 Btu/hr.

When you are pressed for time converting a new or old building to defense production... Janitrol Unit Heaters are your best solution for the provision of clean, automatic and economical gas heating.

After your heating requirements are analyzed and installation layout completed, it usually takes but a few days to install Janitrol equipment.

In addition to speedy installation, you get many other advantages when you specify Janitrol Unit Heaters, including: low initial investment and maintenance costs, time-tested proven performance, more worthwhile design and operating features. Janitrol equipment is installed by experienced, factory authorized heating contractors.

Write today for the new "Businessman's Blue Book of Better Heating".

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Also Manufacturers of Surface Industrial Furnaces, Kathabar Humidity Control

NAMES & FACES



"Being a Boss

Patricia Winter is a quiet, somewhat shy woman in her fifties. For most of her life, in her quiet, shy sort of way, she has been shaking the daylights out of the habits of the American consumer.

When she was 17, Patricia Winter began selling a product that eventually got people around to admitting that humans—not just horses—sweat. While she was still in her twenties, she helped coax the U.S. female into painting her fingernails. Today she is at the center of a movement that may eventually turn American kitchen culture upside down. For a want of a better name, it can be called the herb renaissance.

• **Herbalist**—Mrs. Winter (she is the widow of Ezra Winter, American muralist) is mistress of House of Herbs, a redolent patch near Salisbury, Conn., in the foothills of the Berkshire Mountains. Officially, she is president and chairman of the board of House of Herbs, Inc., the business that she built from a standing start 10 years ago to an estimated sales volume this year of more than \$500,000. But Mrs. Winter is hardly the board-chairman type.

In fact, on a sunny morning, a visitor to the corner office of the 150-year-old house that is company headquarters might easily be lulled into believing what Patricia Winter tells him: "Being a businesswoman is being the most horrible thing in life. It would be a better thing if I didn't think so."

• **Disarming**—Pat Winter is disarmingly feminine; there is none of the brittleness that people have come to expect in the successful career woman. She

PROPRIETOR Patricia Winter, who "really wants to paint and sculpt" has already built two businesses, is now in her third—House of Herbs, Inc.



CUSTOMER This is what happened when one lady was introduced to herb wine vinegar in House of Herbs' showroom. (In

Is Horrid"

delights in high heels and smart suits, wears her hair in a fashionable poodle cut. When she speaks, it is a soft voice that comes out in a half-hesitating way. She is completely gracious.

But she is also the young lady who, at 17, set her mind on making \$1-million.

"I suppose it was because I wanted to study art and go abroad," she says, "and money seemed the only way to do it. Anyway, my father, who was a doctor in Cincinnati (the family name was Murphey), had a formula that he had used in treating eczema. He had also discovered that it took the odor out of perspiration and stopped it mildly. I thought maybe I could sell it, and decided to give it a whirl."

• **Shattered Taboo**—The whirl produced the Odorono Co., a business that not only made Pat Winter her \$1-million, but added a new morning habit for a fair chunk of the U.S. population.

"It seems fantastic in a way," she says. "I started with \$25, a few bottles, and a batch of formula that father had mixed up. I got some of the patients that father was treating free to go out and canvass on a door-to-door basis. It was the only way we could do it—mentioning perspiration in public was strictly taboo. And do you know before we finished there were ads in all the big slick magazines. Sex copy, too. Things like 'Within the Curve of a Woman's Arm' and 'Are Men the Worst Offenders?' And nobody blanched."

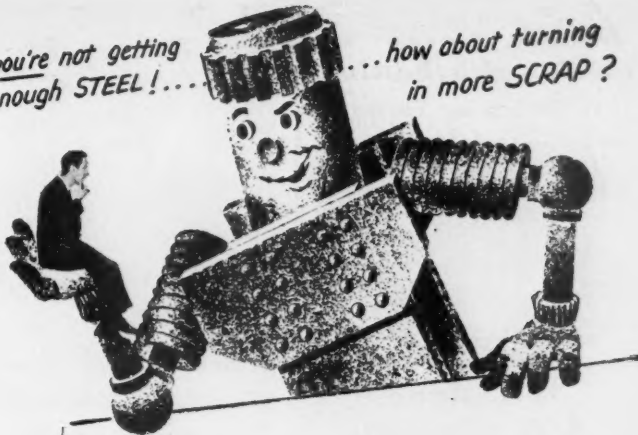
Four years after she launched Odor-



the trade, herb is pronounced like Herbert.)

BUSINESS WEEK • Nov. 24, 1951

So you're not getting enough STEEL!... how about turning in more SCRAP?



There's only one quick way to get more steel!

...get more SCRAP to the mills, at once

Let's be realistic about the scrap shortage. The need for scrap is desperate. It threatens to hamper our whole National Defense effort—and it vitally concerns you because it boils down to this:

Unless 100,000 tons of industrial scrap roll into the steel mills every day, steel production will drop, and there'll be less steel for everyone—you included.

On the other hand, if more scrap is turned in, more steel will be turned out—and the more steel that's made the more steel you'll get.

So—if you want more steel—do your full share in getting your scrap back to the mills. Comb through your plant, again and again. Tap every source of dormant scrap. Dig out every

retired machine that you can possibly spare and rush it to your scrap dealer. Rip out any old rails and switches that are rusting away on unused sidings—and scrap them. Scrap your antiquated dies, jigs and fixtures, your worn-out tanks and boilers that are gathering rust in some forgotten corner. Make sure that not a single pound of scrap is by-passed. Sell it—ship it. It means good money for you, more scrap for the Nation's scrap pile, and more steel for everyone.

• • •

Remember—the Nation's productive effort depends primarily on steel—and steel depends on SCRAP... your scrap. Turn it in—NOW.



You'll find your local scrap dealers listed in the yellow pages of the phone directory.

This space would ordinarily be used to tell you about

OUR STEEL WAREHOUSE SERVICE

but, because steel cannot be produced without SCRAP, we are asking instead for your all-out help in getting more SCRAP to the mills.

UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSES COAST-TO-COAST

UNITED STATES STEEL

Insist on...
the Box with the wings

For Mailing Box Economy



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For immediate delivery

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ATTLEBORO FALLS, MASS.
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WHEN YOU'RE ASKED...

WHERE WERE YOU
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BE SURE YOU'RE ABLE TO SAY...

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"I get wrapped in an idea, and first thing I know I put my foot in a business."



"I spent an ungodly amount of money on promotion and ads. I wasn't very wise."

ono, Mrs. Winter moved from the curve of the arm to the tip of the finger. In 1922 she introduced the first varnish nail polish in the U.S. by buying the rights to a French formula. "I wasn't terribly interested in the product," she says now, "but I thought it might become a fashion item. Most people told me that no one would buy it. Men would never stand for it. They did."

• **Sold**—With occasional stops and spurts, Glazo, the nail polish, and Odorono grew in volume through the twenties. In 1928, with a business worth something close to \$4-million, Mrs. Winter sold out. The buyer was Northam Warren Corp., originator of Cutex, and manufacturer of both Glazo and Odorono today.

"I guess what made up my mind to sell," Mrs. Winter says, "was that I had waited so long to do the things I wanted. I wanted to sculpture and to set up the sort of home I had dreamed about. So I rented a penthouse in New York, and for three years I led a perfectly lovely life."

• **Faces and Stomachs**—And then came herbs. The beginning of it was in 1938, after Mrs. Winter had married Ezra Winter (her third husband) and moved to a farm at South Canaan, Conn. "I was doing some research for a cosmetics mural my husband was painting," she says. "Of course, I ran into all sorts of mentions about herbs as beauty preparations. That started things. First it was a blend for a cosmetic that I tried; then I thought I would make two or three teas. And all this time I was doing more and more cooking with herbs. It's always been that way, I get completely wrapped up in an idea, and the first thing I know I have put my foot into a business."

Possibly, she can blame it all on herbs' intimate partnership with witchcraft, but Mrs. Winters did, indeed,

find herself in business in the winter of 1941. By then she had acquired a formidable garden of the rather dull-looking plants that for years had worked merry magic in European stockpots. (Herbs, incidentally, are defined by Webster as any leafy plant without a woody stem. Kipling said that "Anything green that grew out of a mold, was an excellent herb to our fathers of old.")

• **Special Blends**—Her first products were her own special herb blends, packaged as gift sets with an eye to the mail-order trade. Her first big customer was Saks Fifth Avenue, which liked the sets so well that at Christmas, 1941, it added herbs to the holly on its main floor. With practically no inventory, Mrs. Winter had to deliver to Saks each morning by station wagon; the sets that had been made up the day before were trundled-ceremoniously down the main store aisle just a reach ahead of the customers waiting outside the doors.

Then, as now, the House of Herbs' line was aimed at the quality store rather than at the supermarket. Price alone keeps it out of most shopping baskets—1½ oz. of oregano or tarragon, for instance, cost 35¢. Further, Mrs. Winter has intentionally steered clear of the type of herbs that are standard on most grocers' seasoning shelves. The products (today there are some 50-odd of them) are a collection of her own blends and specially processed herbs and spices—things like herb wine vinegars, herb-seasoned salts and sauces, and, of course, savory, basil, marjoram, juniper berries, and rosemary.

"What I am really trying to do," Mrs. Winter says, "is to recapture something in American cooking that our ancestors had, but we have lost. The colonists knew more about herb cooking than most housewives today. And yet to cook with herbs is to do



"With herbs, you change the most ordinary food into a culinary masterpiece."

something wonderful to food. By using them, you can change the most ordinary food into a culinary masterpiece. Why people neglect them, I will never know."

• **Long Pull**—When House of Herbs started in 1941, Patricia Winter will tell you she was "broke." In any case, she had to raise capital from outside—\$15,000 in all, mainly from the sale of stock to friends. Whatever the business made in the first years was ploughed back into advertising and promotion. "I spend an ungodly amount of money. I was so excited, I did more than I should have on promotion. I wasn't very wise."

Wise or not, volume reacted approvingly. Sales climbed from \$6,000 in 1942, to \$24,000 the next year, to \$48,000, and so on. New stores were added—outlets like S. S. Pierce, Cristede, Lewis & Conger, Bloomingdale's; gift sales began to slide (they are only 15% of total sales today) as a regular trade took hold. Here and there, people began to talk about the "revival" of herb cookery. And other specialty houses—competitors like Long Island's Twin Trees—found the herb market growing more fragrant.

• **Migration**—Five years ago House of Herbs outgrew its Canaan farm and moved west to Salisbury. There on a 250-acre farm, Mrs. Winter laid out a 22-acre herb garden, her main supply source, though some plants are still grown in Sheffield, Conn., and some in California. The barns on the land gave her the processing and warehousing setup she needed.

Today Mrs. Winter is thinking in an undefined sort of way about broadening the distribution for her line. And after that? "Well, I don't know. I still want to do the things I aimed at at 17. Maybe, I can still do the sculpting and painting I've put aside so often."



THE PLUG THAT COST AN EXTRA MISSION

It was an ideal day for a photo reconnaissance mission—bright and clear with perfect visibility "over target." Every shot should have been perfect.

Instead, the film turned out completely blank—the "recon" mission had to be re-run and the scheduled bomber raid put off an extra day.

Investigation disclosed that jars from rough air had disconnected the

plug supplying power to the camera. To eliminate this difficulty, Air Force officials consulted the Graybar Electric Company. Shortly afterward a special locking plug—manufactured by one of Graybar's oldest suppliers—was made standard equipment on all photo-reconnaissance aircraft.

Though a simple problem and solution, this example points up the extra help you can get from Graybar.

● Specialists in all the major electrical fields can help you solve technical problems...can procure, or suggest alternates, for electrical items in short supply. Your local Graybar Representative will forecast delivery dates and supply complete catalog and quotation service on any of the 100,000 items Graybar distributes.

In addition, Graybar's nation-

wide warehouse system permits day-by-day checks on the over-all supply picture—helps you anticipate job-delaying shortages. Subject to defense priorities and regulations, Graybar can supply—on a single order—everything electrical for industry, power transmission, transportation, communication, or for construction.



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avoid electrical delays—
plan ahead.

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IN OVER 100 PRINCIPAL CITIES



CHARLES STEWART MOTT:

He Owns 1-Million GM Shares

Charles Stewart Mott, the man who owns more shares of General Motors stock in his own name than anyone else in the world, looks like a fictional tycoon. But the resemblance ends there.

Recently asked a "global thinking" question about economics, he replied: "I began to make axles, and that made me some money. I used the money to make more axles, and that made me some more money. I used the money to build more facilities to make more axles—and that was the way it went."

That's an oversimplified sketch of Mott's rise to eminence. It is a fact, though, that he started back in 1901 with the Weston-Mott Corp., a \$25,000 enterprise. In 50 years, this has grown into the prodigious Mott holding of a million shares of GM stock, plus the quietly operating but important Mott Foundation in Flint and other holdings that include utilities, sugar, chemicals, banks, and retail stores.

• **Genesis**—Mott, born in 1875, came of a middle-class family. His grandfather had been a farmer in Saratoga

County, New York; his father sold farm products and acquired a stake in a small company making soda water dispensing machinery.

After the Spanish-American war Mott began his manufacturing career at a bench in the soda water factory. Then the business of dispensing soda water began to change; Mott's father saw the handwriting and merged with a Utica (N. Y.) operation to make bicycle wheels. The younger Mott became superintendent of Weston-Mott Corp. at a salary of \$100 a month.

Trouble hit the fledgling company in 1902. Busy on a comparatively huge wire wheel order for a company making a primitive motor car, the factory received a telegram canceling the business. This was Mott's first acquaintance with inventory troubles—he had a plant full of material, with no market for it.

Mott tried to convert to wooden artillery-type wheels, then in their infancy, but the wooden wheels lacked appeal (later they were to become standard for many years).

The car companies those days wanted wheels and axles complete. Having found what the customers wanted, Mott set about to fill the bill.

• **Turning Point**—That was the turning point. In 1903 Weston-Mott delivered 1,500 axles to Cadillac; they went into the famous first "one lugger" Cadillac. Billy Durant, with ideas of bigness already in his head, saw those axles, liked them, and invited the company to Flint.

The move was made in 1907. Weston-Mott expanded until its account against the Durant enterprises amounted to more than \$1-million. Then, without notice, the Durant operation suspended in 1910 while Durant went to Wall Street for money.

• **Nest Egg**—Durant got the money, and Weston-Mott got paid. In 1913 an ever-expanding General Motors took over the axle company, then worth about \$3-million. Mott took GM stock in exchange. It was one of the smartest things that anyone ever did.

Since then he has sold only scattered shares of stock and for only short periods—he always bought back what he had sold, and a little more besides. Today the proxy statements show him the holder of an even million shares.

Although GM made his big money for him, Mott thinks of himself as an enterpriser rather than an investor. When Weston-Mott began to make axles, he designed the axles and helped build the machinery to produce them—and carried the cost accounting in his head. Many others did that, but most of them went broke. Weston-Mott prospered.

• **Enterprises Grow**—At 76 Mott could pass for 60. He's tall and stands erect, rosy-checked, and possessed of eyebrows

Reducing Diet for Railroad Cars



To the Executive Planning for TOMORROW...

What does a "jeep" pulling a freight car have to do with your business? Simply this. It dramatically demonstrates that profit-eating, non-revenue-producing "dead-weight" can be substantially reduced by the proper use of aluminum.

Here's what Reynolds Aluminum worked out for the railroads. In 1945, 30 Reynolds-designed and Association of American Railroads-approved, aluminum box cars were put into service. The lightest of these cars was 9,000 pounds less than the 46,000 pound average of the standard 50 ton box car. This weight reduction eliminates 72,000 ton-miles of "dead-weight" per car per year. Such savings call for progressive thinking and positive action on the part of the railroads.

Consider further, that there are savings in maintenance and in car life by using aluminum. The life of an aluminum freight car is conservatively estimated at 25-35 years before major overhaul as opposed to 10-20 for the excessively heavy, rustable metal cars... more good reasons for using aluminum.

No matter what your business, you can profit by using aluminum for your products. It is strong but light. It is resistant to rust and corrosion... has natural attractiveness and ease of fabrication.

Reynolds Aluminum Specialists are working now with many companies. Let them show your designers how you can get the maximum benefits of aluminum for your products.

The expanding aluminum producing facilities of Reynolds Aluminum... the ample bauxite ore deposits... assure an increasing supply of tomorrow's main metal—at consistently low prices!

Call the Reynolds office listed under "Aluminum" in your classified directory... or, write to Reynolds Metals Company, 2585 South Third Street, Louisville 1, Kentucky.

and to the Man in Charge of TODAY'S PRODUCTION!

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"I used the money to make more axles, and that made me some more money. . . ."

that fan out over his eyes. He talks quietly, expressing himself well without hesitation.

When he is in Flint, the headquarters for his multimillion-dollar enterprises are a small suite of offices in the Mott Foundation building, whose 15 floors make it the tallest in the city. From this office his influence stretches out in all directions.

Today Mott is a director of General Motors, as he has been since 1913; his counsels in the GM board room, particularly his appraisals of budding executives, are listened to with interest by his fellow directors.

He and the Mott Foundation—to-day they are hard to distinguish—hold large interests in nine water companies serving Midwest cities. He is a factor in sugar company operations, he has had an interest in Michigan Chemical Co. for the past few years, sits on bank boards, and otherwise maintains a diversified area of business activity.

• **The Politician**—Mott's interests go beyond business itself. In 1912 he resigned his then-\$25,000 job as president of Weston-Mott and ran for mayor of Flint. He was elected to that \$300-a-month post, served for two terms, and was one of the most popular mayors in the city's history. In 1918 he was again elected mayor, but left to serve in the army.

As a military man he took over production of all army vehicles in the Michigan-Indiana area and rose to the rank of major. He held an army reserve commission many years after that.

He tried his hand at politics again in 1920, seeking the Michigan Republican nomination for governor. His friends—men of wealth and day laborers alike—campaigns for him in vain. That episode ended his political career,



"Bill" Nelson, Manager, Acoustical Division
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Mr. H. D. PALMER
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"To our original plant, completed in 1923, we have since made many additions. This continuing expansion reflects our continuing satisfaction with our West Coast plant as a means of providing our FENESTRA building products to the rapidly-growing markets of the West."

Detroit Steel Products is one of 228 leading companies with branch plants in Metropolitan Oakland. If you seek the profit-making advantages they enjoy here, investigate before you locate a plant anywhere.

*MOA stands for Metropolitan Oakland Area—includes all of Alameda County. Wide variety of sites in rural and semi-rural areas conform with Government's "industrial dispersal" program. Moderate cost of acreage plus year 'round mild climate, make possible single-floor buildings for efficient, straight-line production.



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but he's still interested in political and civic projects.

• **Sports-Minded**—He played tennis, his only real sports activity, until a few years ago when his doctor decided it was too strenuous for a man in his seventies. Today his primary sports interest is the annual football game between Flint Northern and Flint Central high schools. A pet hobby of his own is watching over the affairs of the city's juvenile softball league.

• **The Philanthropist**—His interests in Flint have always been paternal as well as financial. When the Union Industrial Bank of Flint failed in 1929 after defalcations of its officers, Mott brought in \$3,592,000 in cash to shore up the tottering structure. The bank was saved.

To Flint's 170,000 citizens, however, Mott is better known today as the founder and supporter of the Mott Foundation. The size of the foundation endowment is not on record, but obviously it is substantial. Organized for charitable and educational purposes, it operates in a wide variety of areas—underwriting programs proposed by civic groups; providing health examinations for school children; paying for medical treatments too expensive for parents of those children to finance; maintaining playgrounds, recreations centers, and youth centers; and otherwise serving the community. It also helps ward off juvenile delinquency.

• **Advice to the Young**—Mott might be called a liberal conservative. He frowns on many of today's developments—what he feels is the growing belief among younger people that they can "live off each other," instead of earning their own way.

"I can't tell you where we'll wind up," he remarks. "But I can tell you which way we're going. We're headed toward trouble, lots of it. High taxes are upsetting enterprise and incentive. Young people are getting wrong ideas." "How about the young men, Mr. Mott? Suppose you were 23 and had all your bank of experience—what would you do?"

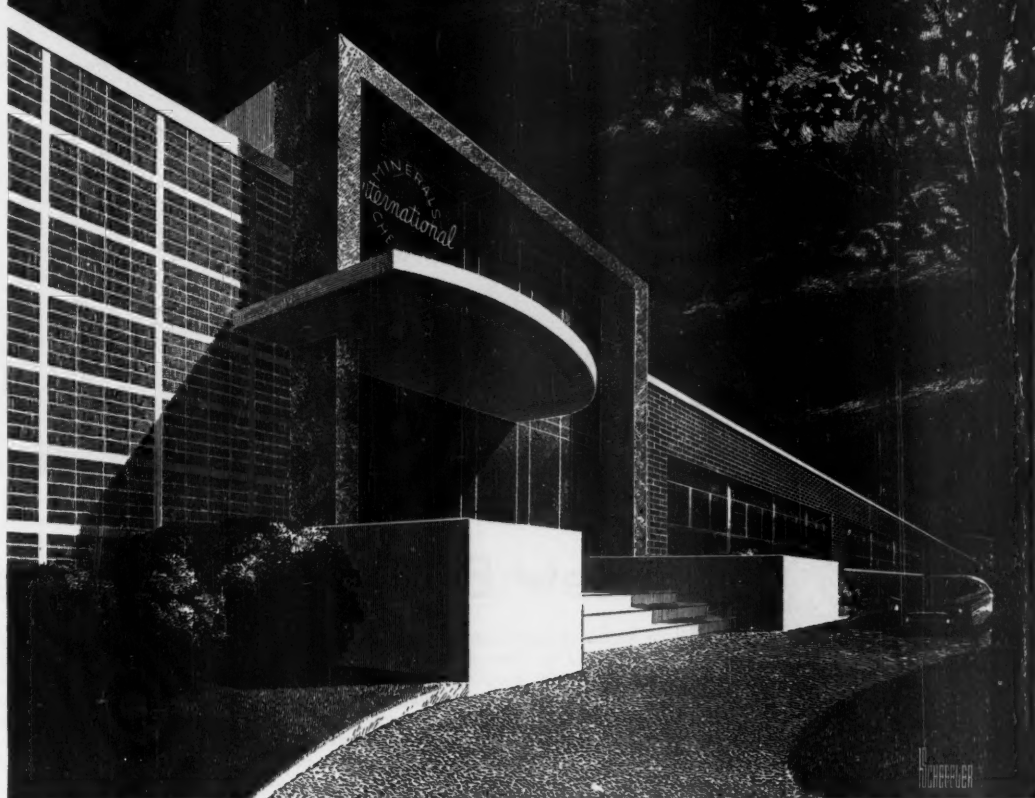
"I think a good sound business education is essential—knowledge of how business operates. A young man should have that. And brains and ability are still at a premium. Also, he should know how to do something with his hands. They can take away his money, but as long as he knows some kind of trade they can't take away his means of earning a living."

"Is there any choice between a small company and a large one?"

"Intelligence is more important. A man has opportunity in a small company—and men go pretty fast in a big one like General Motors when they're good. Look at the men who started at GM as clerks and are vice-presidents there today."

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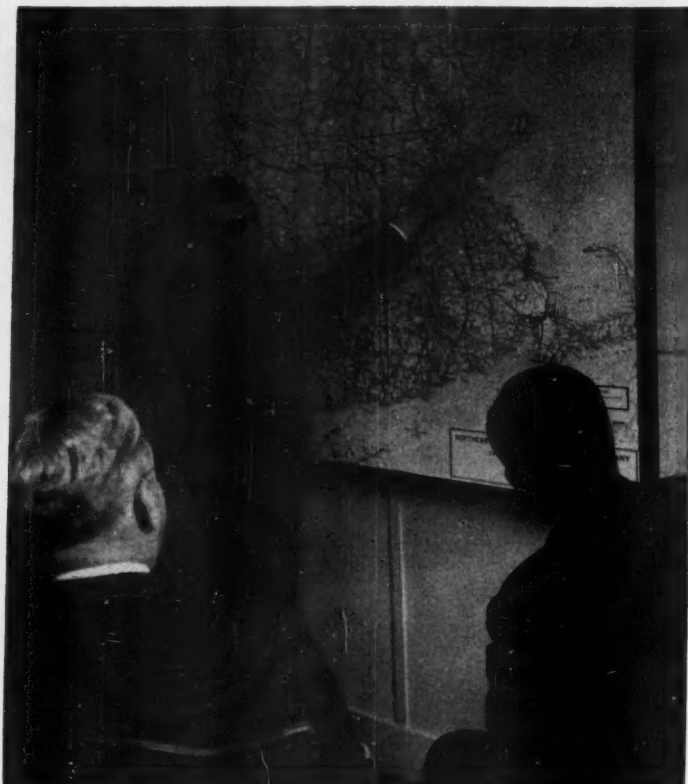
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UTILITIES



WILLIAM NORMAN, president of Northeastern Gas Transmission Co., points out how his natural gas pipelines run close to the . . .

New England Gets Natural

Victory trumpets are blowing on the battlefield of New England natural gas. The gas is already flowing into the area from the Texas-Louisiana fields. One city—Holyoke—is fully converted to natural gas. At other towns and cities the fuel is waiting in the mains, ready to pour as soon as gas-burning equipment is all converted.

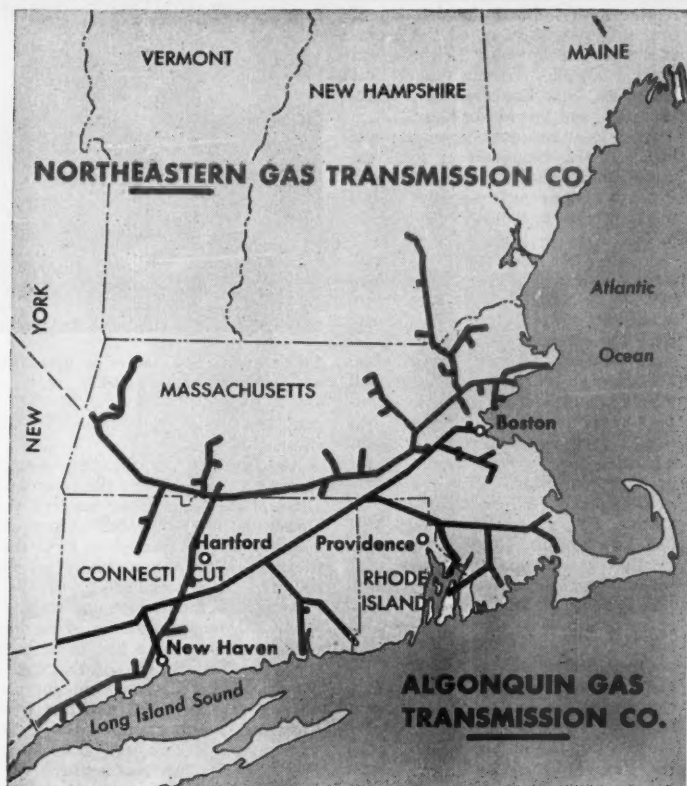
The trumpets are blowing, but the battle isn't over. Northeastern Gas Transmission Co., already granted half of New England's power-consuming area (map) by the Federal Power Commission, is fighting in the courts for the whole area. Driven by its 36-year-old president, William Norman, Northeastern refuses to rest on its laurels of being first to organize, first to lay pipe, and first to bring the gas.

• **Winter Troubles**—The arch rival, Algonquin Gas Transmission Co., is fight-

ing right back, hanging onto its FPC franchise to supply metropolitan Boston and other potential gold-mine areas. Also, it's fighting against approaching winter in an effort to overcome Northeastern's long lead in the laying of pipe. That lead was won when Norman passed a few miracles.

The whole story of bringing natural gas to New England is immensely complicated, a near throwback to the days when railroad titans found the pick-handle as mighty as the pen. New England's natural gas came without benefit of physical violence, but the fiscal, corporate, and legal infighting was not gentle.

The picture comes clearest if you start at the beginning, then tag along after the galloping events. For clarity, you'd do well to remember that the company names, even rivals, sound



... RICH BOSTON MARKET, which FPC will not permit them to supply. Northeastern's demand to serve all New England is now in court.

Gas, But Suppliers Fight On

muddledly alike. Thus Northeastern Gas Transmission is no kin of Texas Eastern Transmission, which supplies Algonquin.

• **Crying Need**—To start the natural gas story there's New England, an area where industry clamors for power, and power is scarce and dear. The three southern states—Massachusetts, Connecticut, and Rhode Island—compete in many fields with other industrial areas that have plenty of natural gas. They want it, too, plenty of it and quick.

They wanted it back in the summer of 1949, too, but nobody was doing much about it except brood. With the pipeline companies looking for new territory, something was due to bust.

At that time, Norman worked for Gardiner Symonds, the president of Tennessee Gas Transmission Co. Sym-

onds sent Norman north, told him to create Northeastern in a hurry—from scratch—before anyone else could get into the field.

• **The Stilly Night**—Norman hit New York on an August evening, picked up a couple of lawyers, and started for Boston by car. Northeastern had its corporate birth in the back seat of the car. By the time they reached Boston, the company's charter, tariff schedules, and contracts were all roughed out.

The party reached a Boston hotel at 1 a.m. and found a hastily alerted group of New Englanders waiting. These were the future directors. Next morning, infant Northeastern signed up its first customer. Norman chortles over the coup. "We were in, while most of the opposition was vacationing on Cape Cod."

In just a year, Northeastern had

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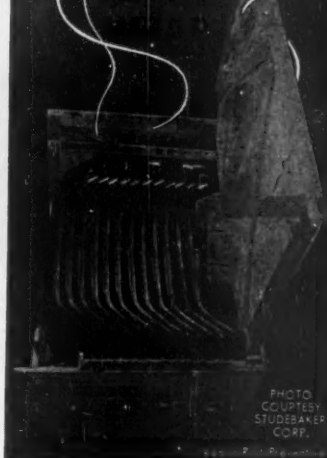


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signed up the requisite number of customers and had filed formally for FPC approval.

• **"Local Boys"**—About the time that Northeastern finished the first lap of the race, Algonquin got off the marks. It was formed by three New England utility companies—Eastern Gas & Fuel Associates, New England Gas & Electric Assn., and Providence Gas Co.

As a local concern, Algonquin was billed as the champion of local gas users. But Texas Eastern, which operates the famous Inch pipelines and is to supply the gas, holds a one-third interest.

With both companies established, came a long delay while FPC decided what to do about them. Charges were made, off the record, that the delays were caused by the coal interests. It was even whispered that Algonquin had been formed to keep natural gas out of New England, not to bring it in. (Eastern Gas & Fuel, one of its founders, had coal as well as gas interests.) These sabotage charges were heatedly denied by Algonquin officials.

After much head-scratching and dissenting, FPC's majority decided that the area's best interests would be served by the two companies. Finally, last spring, Northeastern got its certification to serve the upper half of Massachusetts and some parts of Connecticut.

• **Court Action**—Norman pocketed his certificate, but continued to claim that the whole of New England could best be served by Northeastern alone. He started court action seeking to reverse the FPC rulings against him. Right now, it seems that the hearing will be held in February.

Meanwhile, from the moment he got his certificate, Norman began to rush a pipeline from Tennessee's main line at Buffalo across the tough Berkshire hills, and into New England. In just two weeks, from a standing start, he hired engineering and real estate crews, signed up 1,200 pipeliners, got the ball rolling on deliveries of \$3-million worth of pipe, scoured the area for valves, designed meter stations, and arranged for short wave radio facilities.

It was a grim two weeks for everybody, with scant time out for food or sleep. Norman gave his orders, then left the men to do the jobs on their own. Delegation was complete, but the job had to be done right. In August gas was flowing to the civic rim of Springfield.

The main lines were upped from 20 in. to 24 in., partly as a hedge against the hope of being assigned the whole of New England, partly as insurance in case of market growth in the already assigned area. As of today, Northeastern has completed all the line laying planned for 1951. That means the com-



"We were in, while most of the opposition was vacationing on Cape Cod."

pany can service, right now, 75% of its assigned area.

• **Adequate Supply**—Bringing Northeastern up to date gets the story well ahead of Algonquin. Northeastern was already laying pipe when Algonquin was still trying to convince FPC that it could supply the necessary gas for the area it was seeking.

At first, Texas Eastern undertook to supply Algonquin from its main line in Pennsylvania, via a line to be built across New Jersey. FPC said that wasn't enough. Texas Eastern then got permission to build a 571-mi. line from Mississippi, to hook up with its big underground storage well at Oakford, Pa. Texas Eastern also arranged with United Gas Pipeline Co. for back-stopping supplies sufficient to meet FPC requirements.

This deal brought Algonquin's supplies to a point where they matched those that Northeastern could get from Tennessee Gas and from Transcontinental Gas Co. The latter's idea was to hook its lines in New Jersey onto Northeastern's at Greenwich, Conn. Northeastern's advantage over Algonquin is that Northeastern has pipes in being and gas in the pipes.

• **Four-Month Delay**—Back last March, a while after certifying Northeastern, the FPC told Algonquin that it could serve the Boston area, the South Shore communities to Cape Cod, Rhode Island, and what was left of Connecticut. But there was a four-month delay before the FPC gave a full go-ahead on pipe laying. That meant that Algonquin had lost the whole summer construction season and had seen a lot of already-ordered steel diverted.

A lot of substantial New Englanders took a dim view of the delay. Sen. Tobey of New Hampshire charged that FPC was dragging its feet, under pressure from the coal people. To incensed

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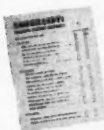
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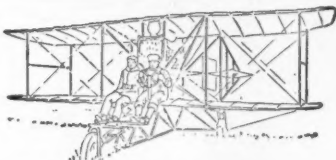
Flying Forgings-

THE MODERN AIRPLANE IS LARGELY
MADE UP OF HAMMERED METAL PARTS

THERE WERE FEW FORGINGS IN THE BAMBOO-AND-VARNISHED-LINEN AIRPLANE OF 1911, but even then, the primitive airplane engine had them.

The original Wright plane that went into production—the Model B—had a high speed of 42 m.p.h., carried 2 people, had a little over 2 hours gasoline supply and a service ceiling at full load of about 8000 feet.

Today's plane—40 years later—has a high speed of 600 m.p.h., carries 125 passengers, has enormous gas capacity and ceilings up to 50,000 feet.



Tomorrow's plane may cruise at 1200 to 1500 m.p.h. (N. Y. to Europe in 3 hours), may land almost vertically and may be fireproof in crashes. And it, too, will be built largely of hammered metal parts.

(Below) 5000 lb. CECO-DROP
Gravity Drop Hammer



IT is hard to associate flight through the air, —the flight of birds, the flight of planes—with weight, strain, stress, impact; yet the greater the size of the plane, the higher the speed, the heavier the load, the greater become the forces tending to pull it apart. That is why the toughness and strength of the metal parts that make up the modern plane are so important, why drop forgings and hammered sheet metal parts are essential in airplane construction—why the hammers built by Chambersburg are busy night and day in the aircraft industry, as in all other manufacturing industries which use metal parts that must not fail.

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THE HAMMER BUILDERS



Norman pocketed his certificate, but continued to claim that the whole of New England could best be served by Northeastern alone.

industrialists, it was a matter of dollars and cents. For example, natural gas in Springfield meant a 10% cut in rates. If natural hadn't arrived, the rates would have had to go up another 15%.

• **Stern Chase**—Algonquin now is doing what it can to make up the delay. Its president, Gen. Harry H. Johnson, is trying to duplicate the feats of his fellow-Texan, Norman. Johnson won a reputation as a driver in World War II. He has crews digging ditches, despite the freeze, on parts of the main line from Pennsylvania. Other crews have swamped out a route across the northeastern corner of Rhode Island, heading for Boston. Others are working on a section near Hartford, Conn. But it's problematical if they can accomplish much before next summer.

That's how the rivals stand physically; Northeastern is still leading by a lap, as it has all along. The legal picture is not so clear, and it won't be until the courts do some ruling, if then.

As soon as FPC certified the Algonquin territory, Norman appealed to the U. S. Circuit Court of Appeals in Philadelphia. His argument for giving Northeastern the whole area goes like this:

- Building duplicate main pipelines across Connecticut and Massachusetts is uneconomical. Norman guessed at first that this would add \$3-million to New England power bills; with rising costs he raised the ante to \$4.5-million.

- Northeastern has pipelines already built, which can supply the whole of New England.

Norman raises some tricky points on the two-company system. Take the matter of rates. By usual procedure,

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Mead De & Se Tints provide extra color at no extra cost. These six clear tints are ideal for halftone or line illustrations. They are surface sized for offset lithography. They are also widely used for letterpress. Try them for colorful effects at minimum cost.



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PAYLOADER

is this 4-wheel drive Model HM with 1½ cu. yd. bucket. PAYLOADERS are used by contractors, municipalities, utilities, railroads, mines, quarries and industrial plants.

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No matter what your business — no matter where you are — there's a Hough Distributor near you who will help you with your problems . . . and provide you with excellent service forever. "PAYLOADERS" are special Hough-built tractor shovels that dig, load and carry all types of materials — unload box cars — handle bags, barrels, bales — bulldoze, work indoors or outdoors, over paved or unpaved surfaces. Every "PAYLOADER" can relieve serious production bottlenecks.

Regardless of the size of your operations there's a "PAYLOADER" model to fit your job . . . six sizes with bucket capacities from 12 cu. ft. to 1½ cu. yds. For information consult your classified telephone directory or write direct. The Frank G. Hough Co., 700 Sunnyside Avenue, Libertyville, Illinois.



If local commissions try to even rates up, Northeastern can't lose.

state public utility commissions consider capital investment in fixing rates. But Northeastern built first, when costs were lower. Hence, says Norman, Algonquin will be charging higher rates than its rival in close-lying areas. If local commissions try to even rates up, Northeastern can't lose. If the rates are put up to fit Algonquin costs, Northeastern gets fatter profits. If the rates go down to fit Northeastern costs, Algonquin is in a financial jam.

• **Hearings**—Technically, Northeastern is asking the U.S. Court to set aside three FPC rulings refusing to let the company present certain parts of its case. The court has been studying the evidence, plus FPC majority and minority reports, since last March. Hearings, and possibly a decision, are now looked for in February. Till then, even the super-active Norman is lying low.

If he wins, Norman says he will present proof that Northeastern can immediately bring gas into such major areas—now out of bounds—as Boston, New Bedford, Fall River, Taunton, Brockton, New Haven, Waterbury, Hartford, Providence, and Pawtucket. That would be the jackpot. But even without it, Norman has carved out a nice little gas empire in the areas he already covers.

Whatever the size of the empire, Norman is digging in to rule it for a long time. The Texan has turned New Englander, with his wife and four children installed in a new home in Springfield. But he still has to do a good bit of commuting by air to Tennessee Gas' headquarters in Houston. That doesn't leave much spare time. What there is of it, Norman likes to devote to his home woodworking equipment—or maybe a few rounds of golf now and then.





THE SHIPPER'S RAILROAD WITH a will to please and the ways of doing so

Shippers like a *friendly* railroad—one willing to solve special problems, offer suggestions, follow through efficiently. We of the Baltimore & Ohio not only offer this willingness, but also *support* it with practical working features like these:

SENTINEL SERVICE. A B&O "first" that provides siding-to-siding dependability on carload freight. Through its *Automatic Records* feature, shippers and receivers are advised of both schedule interruptions and reforwardings.

TIME-SAVER SERVICE. A streamline LCL service that offers dependable schedules, and saves $\frac{1}{3}$ or more shipping time.

PROPER-HANDLING PROGRAM. An educational activity in freight claim prevention through careful handling of shipments over the road, in the terminals and at freight houses.

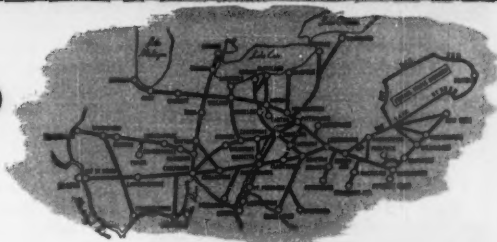
It pays to route via B&O. *Ask our man!*



Baltimore & Ohio

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Judge it by the men who praise it

Industry's machine operators...

The widespread preference for Cutler-Hammer among the men who use motor-driven machines day after day and know the importance of control equipment could be earned only by dependable performance.



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Of the many evidences of Cutler-Hammer Motor Control leadership, none is more impressive than the roster of machinery manufacturers featuring Cutler-Hammer Control as their standard or recommended equipment.



Electrical maintenance men...

Claims and counterclaims mean little to the men who spend their lives keeping electrical equipment working properly. These practical men know the facts by actual comparison when they say, "Cutler-Hammer is No. 1".

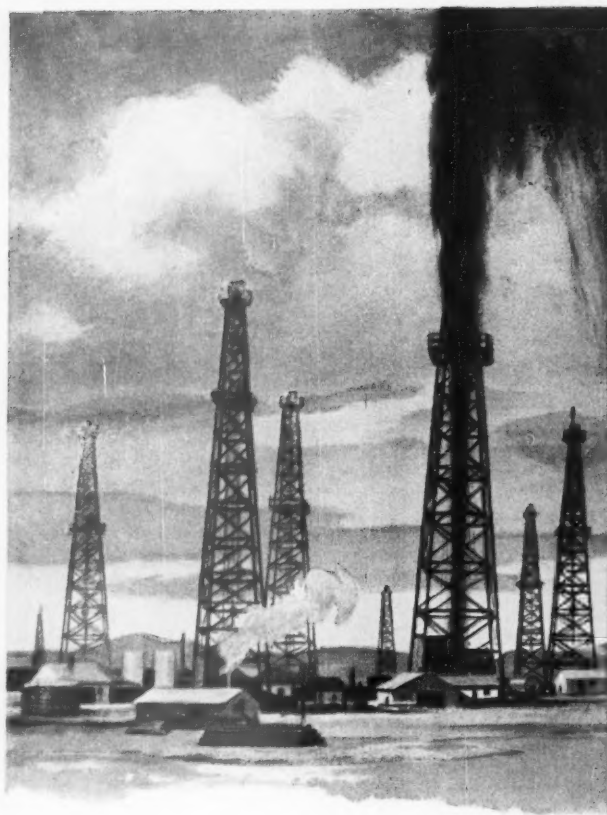
Does it matter whether you specify the motor control you buy by name? Is there any real difference between the various makes of motor control you are offered? They all look very much alike. Is it fact or fancy that there are marked differences in the way they will perform, in the dependability with which they will do their work, in the length of service they will provide?

If these questions have never been answered to your complete satisfaction, ask the men who know motor control. Ask your most experienced machine operators and your electri-

Cutler-Hammer general purpose motor control is recommended by a majority of all electric motor manufacturers, featured as standard equipment by leading machinery builders, and carried in stock by recognized electrical wholesalers in every locality.



cal maintenance men. Check with the builders of the best machines you use, the ones you know are products of the best engineering; see what motor control they supply or recommend. Cutler-Hammer Motor Control has won the respect of technical men everywhere by performance, dependable performance born of the widest of all specialized motor control experience. You can safely judge Cutler-Hammer by the men who praise it. CUTLER-HAMMER, Inc., 1275 St. Paul Avenue, Milwaukee 1, Wis. Associate: Canadian Cutler-Hammer, Ltd., Toronto.



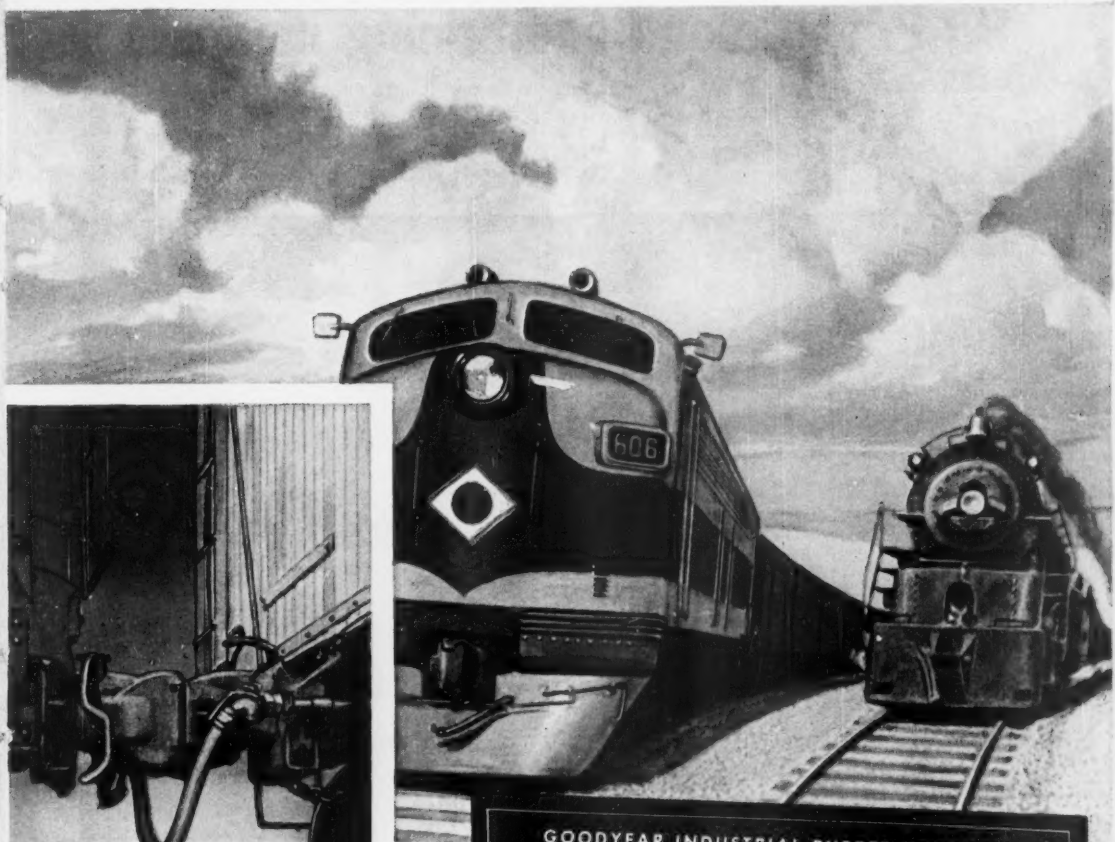
Best way to **START** a gusher—or

Key to Unlocking a rock-bound oil deposit buried thousands of feet under the earth's surface is the rotary drilling hose. To insure safe handling of the extremely high pressures met in drilling, the G.T.M.—Goodyear Technical Man—developed Goodyear's Style 3153-H Rotary Hose. This huge flexible rubber pipe—built by hand, and reinforced with layer upon layer of sturdy fabric and steel cable—is tested at 5,000 pounds per square inch, easily handles pressures devel-

oped in drilling as deep as 20,000 feet.

High-Speed Rail Flyers come to safe, sure stops because hose plays a vital part in their brake lines. Hose failure here can be fatal, too—reason why so many railroads use a G.T.M.-developed air brake hose between cars—a hose that's flexible for easy coupling, strong enough to handle the pressures needed to stop fast-moving, heavy trains of up to a hundred or more loaded freight cars.

Wherever Performance and Dependability are the primary requisites in hose—handling air, acids, steam, petroleum products or other materials—the G.T.M. should be your first source of information. He can choose from the more than 800 types and kinds of hose Goodyear makes to recommend the *one* hose that will meet your requirements exactly. Why not turn the problem over to him today—by writing Goodyear, Akron 16, Ohio.



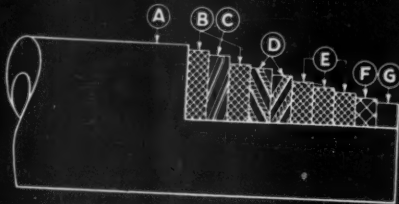
STOP a train

FOR HOSE, FLAT BELTS, V-BELTS, MOLDED GOODS, PACKING, TANK LINING, RUBBER-COVERED ROLLS built to the world's highest standard of quality, phone your nearest Goodyear Industrial Rubber Products Distributor.

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"THE GREATEST STORY EVER TOLD"
Every Sunday - ABC Network*

GOODYEAR INDUSTRIAL RUBBER PRODUCTS GIP-Specified STYLE 3153-H ROTARY HOSE for HIGH-PRESSURE DRILLING

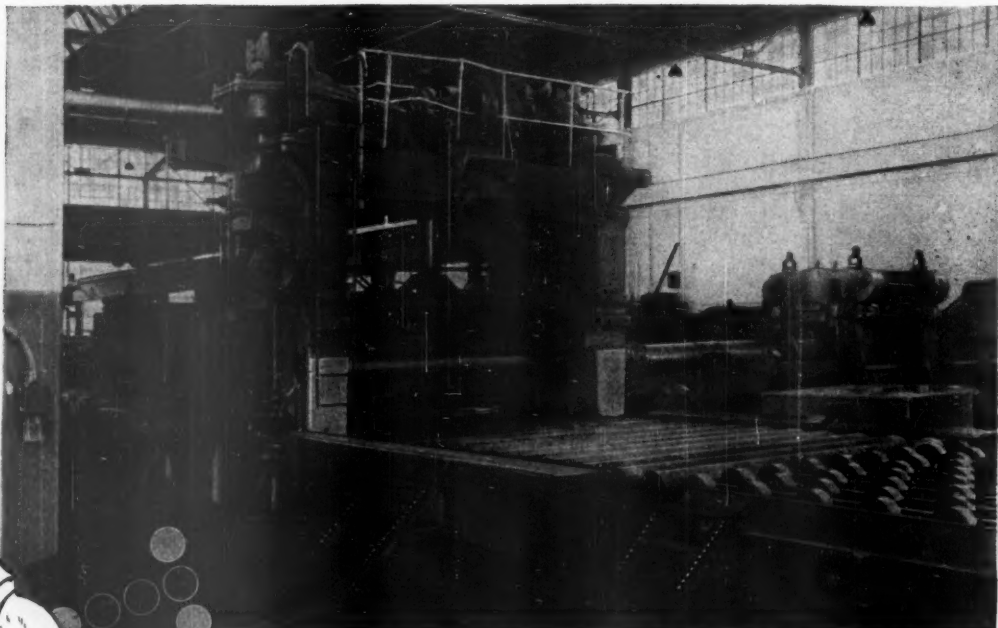
- a—Cover of extra-heavy gauge compound resists gouging, weathering and wear
- b—Extra multi-ply fabric reinforcement at ends
- c—Spiraled copperized steel wire reinforces ends
- d—Two gum-cushioned plies of flexible cable-steel wire
- e—Multi-ply fabric reinforcement
- f—Fabric breaker strip
- g—Heavy mud-, abrasion-, and oil-resistant tube



GOOD YEAR

THE GREATEST NAME IN RUBBER

Du Pont Color Conditioning means BETTER OUTPUT, BETTER MORALE



REVERE COPPER & BRASS INCORPORATED, in New Bedford, Mass. plant, uses light colors to brighten huge plate rolling mill, help employees see and work more efficiently.



FREE New 32-page book shows you how color can boost efficiency

Remarkable improvements in employee morale and production have been noted by management at the hundreds of industrial plants where Du Pont Color Conditioning has been put to work. And yet this scientific painting plan costs no more than ordinary maintenance painting in the long run.

Here are some of the benefits that come from applying scientific principles

of color and light: In work areas and offices, the rate and quality of production are raised. In cafeterias, wash rooms and recreation areas, Color Conditioning provides a pleasing atmosphere . . . improves morale. And in *any* area, Color Conditioning promotes safety—pointing up danger zones, increasing visibility.

Du Pont Color Conditioning has proved its value in a variety of other

installations. For example, it makes for better seeing, better morale and better work in schools and hospitals. It can boost the sales volume of stores—and the patronage of hotels and restaurants—through subtle but positive psychological effects.

Find how this painting plan profits *your* business in the new 32-page book, DU PONT COLOR CONDITIONING. Mail the coupon *today!*

SEND FOR **FREE** BOOK NOW



PAINTS

for every purpose

Better Things for Better Living
... through Chemistry

E. I. du Pont de Nemours & Co. (Inc.)
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Please send me, at no cost, your new 32-page book, "Du Pont Color Conditioning." I'm interested in Color Conditioning for ☐ industrial plants; ☐ hospitals; ☐ hotels and apartment buildings; ☐ schools; ☐ restaurants; ☐ stores; ☐ office buildings.

(Offer not good outside Continental United States)

Name

Title

Firm

Address

City and State

(canton) of Zurich. This was wired all over the world. Strangely enough, in the same election at the same time, a city, not his home, the capital of Switzerland, Berne, reelected him as congressman.

The only advice I shall give Mr. Duttweiler is that, when meeting the Migros employees on the occasion of its 35th anniversary, he should not do it from the Lake with an old, broad straw hat on his head, but in the armor of St. George riding against the dragon, or better against Hercules' hydra, and giving every head of this snake the face of one of his adversaries.

Then, I hope you will print this picture also, and I shall go to Switzerland just to see it posted all over the glaciers, the St. Gotthard Pass, and the huts of the St. Bernard dogs.

JULIUS HIRSCH

NEW YORK CITY

• The opposition party titled their attack "The Crossroads," and asked: "What is the significance for us Swiss?" They claimed the Americans rightly labeled him as a showman and wizard, which they translated literally as "seer," "magician," or "conjuror." Duttweiler replied with other captions from the article: paternalist, promoter, and senator. He said the Americans would never have dreamed that one out of the six captions would have been misused "to cloud Duttweiler's worth with doubt."

No March Stolen

Dear Sir:

Your technological editor made an understandable error in his article "Race for Outdoor Water Paint" [BW—Oct.13'51,p.46], wherein he mentioned that our associate company, Continental Paint & Varnish Co., Chicago, had stolen a march on the rest of the paint industry by being the first to produce a successful exterior water emulsion paint.

We wish this were true, but the basis for the article apparently stems from a new-type outside paint that we introduced last spring. However, it is not an exterior water emulsion paint, although it is decidedly different from standard exterior paints in formula, appearance, performance, and colors. It is quite likely that, because it is such a radical change from current outside finishes, it was assumed that here is the new water paint the industry has been trying to produce for years.

M. C. FISHER

ADVERTISING MANAGER
ARMSTRONG PAINT & VARNISH WORKS
CHICAGO, ILL.

• Whatever it has, Armstrong managed to throw a scare into the paint industry—which universally assumed it

Your Corrugated Containers can have Nine Lives, too!



STAPLE AND RE-STAPLE for USE AND RE-USE



BOTTOMING CONTAINERS faster and better with a Bostitch Model F stapling machine... foot or motor operated. A low-cost investment.

- 1. STAPLED CONTAINERS LAST LONGER**, because Bostitch staples make stronger joints, yet containers are not damaged when "unstapled" for re-use.
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- 3. CONTAINERS REPAIRED BY STAPLING** are almost as good as new ones, because Bostitch stapling machines make patches strong and neat.

WHATEVER THE SIZE AND SHAPE of your corrugated containers, you'll find Bostitch stapling machines and staples that will *fasten them better and faster with wire*. Use the coupon below to get the latest tips on saving time, costs and corrugated board in your shipping room.



RE-USING CONTAINER MATERIALS to make up special sized cartons for miscellaneous shipments — with Bostitch stapling pliers.



REPAIRING USED CARTONS with a heavy-duty Bostitch Model $\frac{1}{2}$ C stapler. Drives staples up to $\frac{3}{16}$ " in length. Choice of 33 $\frac{1}{2}$ " or 10" throat.



REMOVING STAPLES quickly and easily with Bostitch G-7 staple remover without damaging the carton. Lengthens re-use life.

PLEASE ATTACH THIS COUPON TO YOUR LETTERHEAD

BOSTITCH, 700 Mechanic Street, Westbury, R. I.

In the interests of saving corrugated board, please send me a free copy of your folder "How to Save Time and Money in 12 Important Shipping Room Operations."

Name Title

Firm

Street

City Zone State

BOSTITCH®
AND FASTER
fastens it better $\frac{1}{4}$ with wire

ALL TYPES OF MACHINES
FOR APPLYING STAPLES
ALL TYPES OF STAPLES
APPLIED BY MACHINES

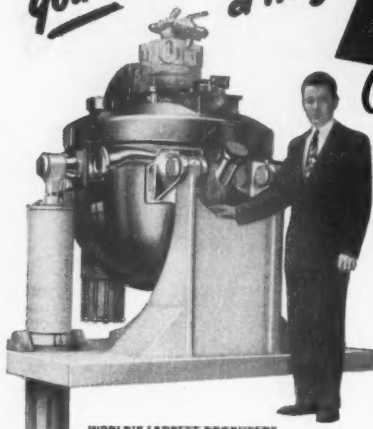
Maybe
you'll never need
a huge

vacuum MELTING KETTLE

but-

THE SKILL THAT CREATED IT MIGHT SOLVE YOUR PROBLEM

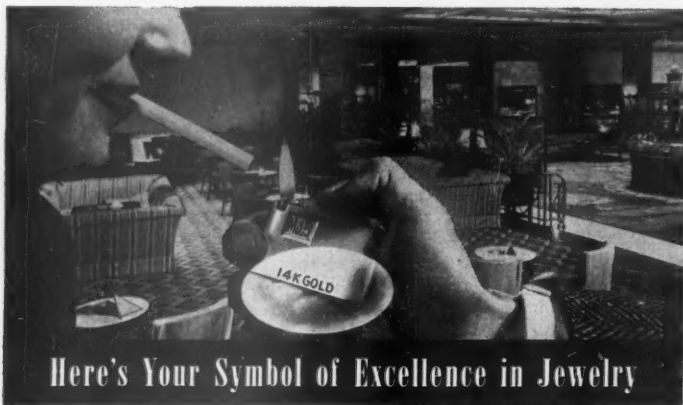
When you need specially built pressure vessels or processing machinery, remember the GROEN "know how" which produced a large battery of this huge Vacuum Melting Kettle from bare specifications in record time. For half a century we've been doing similar jobs in Stainless, Nickel, Monel, Everdur, Inconel. We know how. And when your Defense Contracts or regular productions require such skill you, too, can depend on our ample facilities, long background, engineering experience and financial solidarity. *Why not write us now?*



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Ceaseless research, prime materials and matchless craftsmanship are the essence of excellence in McLaurin-Jones printing, packaging and specialty papers... excellence that makes them the choice of the printing and packaging industries for profitable performance.

LET US HELP YOU WITH YOUR PROBLEMS ON SPECIAL COATINGS AND GUMMINGS — TECHNICAL, INDUSTRIAL, SPECIFICATION AND CHART PAPERS

Among the wide range of McLaurin-Jones papers, famed for excellence, are: *Warfare*, coated paper for printing, label, box covering, cover, postcard work; *Old Tavern Gold* and *Platinum Metallics* for labels, box work, printed pieces; *Guaranteed Flat Gummed Papers* for labels, seals, stickers; *Relyon Reproduction Paper* for the printing trade; a full line of *Sealing Tapes, Slays, Gummed Cambrics* for boxes, cartons, containers.

McLAURIN-JONES COMPANY

BROOKFIELD, MASSACHUSETTS

Offices: New York • Chicago • Los Angeles

was bringing out an outdoor water emulsion paint.

We Make It, They Sell It

Sirs:

In an effort to clarify any confusion among your readers, we would like to point out that there is only one manufacturer for the VOCATRON intercom [BW—Oct. 27 '51, p60], and that is Vocaline Co. of America, Inc., Old Saybrook, Conn. You credited the Bayfort Society—they are the distributors for the North Carolina area.

LESTER M. STRONG

SALES MANAGER

VOCALINE CO. OF AMERICA, INC.
OLD SAYBROOK, CONN.

Airlines Fog

Sirs:

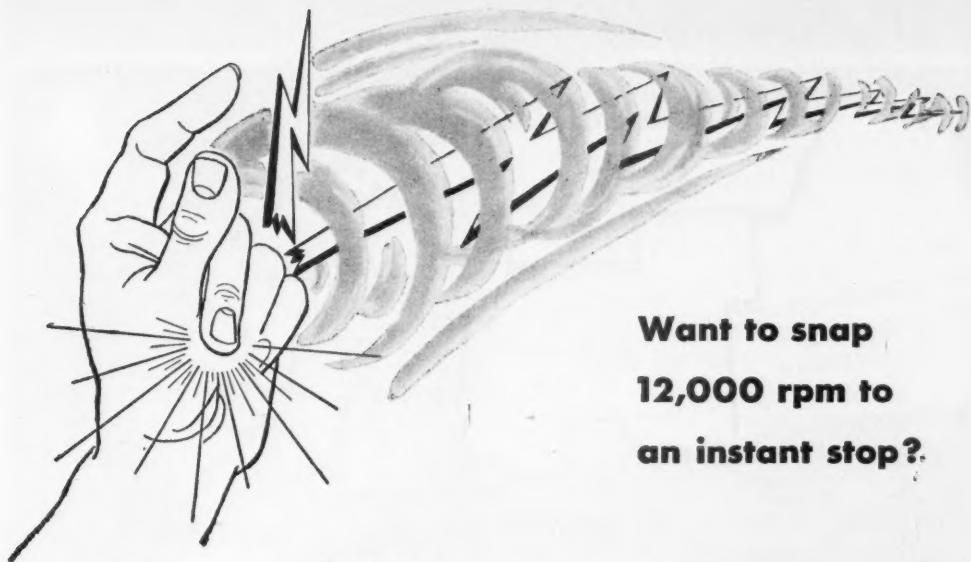
I noted the story "CAB Clears Mail-Pay Fog" in a recent issue [BW—Oct. 13 '51, p25] and would like to add a postscript. Being fairly close to this subject, I got an impression that the story might lead an average reader to believe that subsidies to the airlines consisted only in airmail payments, and that the 45¢ figure CAB arrived at represented complete costs, plus a neat profit of 8%, for carrying mail via the Big Four airlines.

Actually, the separation of airmail pay from subsidy might be considered but one step toward placing airline operations on a truly nonsubsidized basis. The extra millions that government shells out to make up for mail-carrying costs don't begin to represent the total subsidy to airlines. All airlines, major as well as minor, continue to use free a system of airways, with beacons, radio beams, and special weather and air navigation control services, the establishment, upkeep, and operation of which have cost the federal government more than \$500-million and are costing now more than \$50-million a year.

This does not include the cost of the system of civil airports that the commercial airlines use at charges that, in most cases, are too low to be compensatory. Mr. D. W. Rentzel, now Undersecretary of Commerce for Transportation and then Administrator of Civil Aeronautics, told a subcommittee of the Senate on April 14, 1949, that, "taxpayers of the U.S. have an investment of about \$14-billion in civil airports. Of the larger airports, which were financed by federal, state, and local appropriations, only a handful are self-supporting even to the extent of returning out-of-pocket operating and maintenance expenses."

JAMES N. SITES

WASHINGTON, D. C.



**Want to snap
12,000 rpm to
an instant stop?**

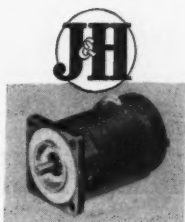
JACK & HEINTZ does it!

Certain flight controls on a new bomber required two small but powerful, high-speed motors that would stop instantly when the electricity was turned off. For this application, Jack & Heintz developed a motor that is smaller and lighter than any previously available in the horsepower desired.

This 15-hp, a-c motor can be tucked under your arm, since it is only 6½ inches in diameter, 8¼ inches long, and weighs 27¼ pounds.

You would expect Jack & Heintz to find a way to compact so much power in so little space and weight. But the interesting thing about this motor is an entirely new braking action that automatically brings 12,000 rpm to a complete standstill in one-quarter of a second!

Light, compact, *controlled* power is vital in most defense production. It should rank high on your list of plans for the future. Now is a good time to find out how Jack & Heintz *Rotomotive* equipment might serve you. For the answer, in 24 pages of facts and pictures, write for "Jack & Heintz Does It" to Jack & Heintz, Inc., Cleveland 1, Ohio.



ANOTHER J & H SPECIAL, the pocket-size, ¼-hp, J&H DA22 a-c motor. It weighs less than three pounds, is totally enclosed, and has a brake actuated by a-c power. In addition to special motors, J&H offers a full line of standard, fractional-horsepower, capacitor-start and induction motors.

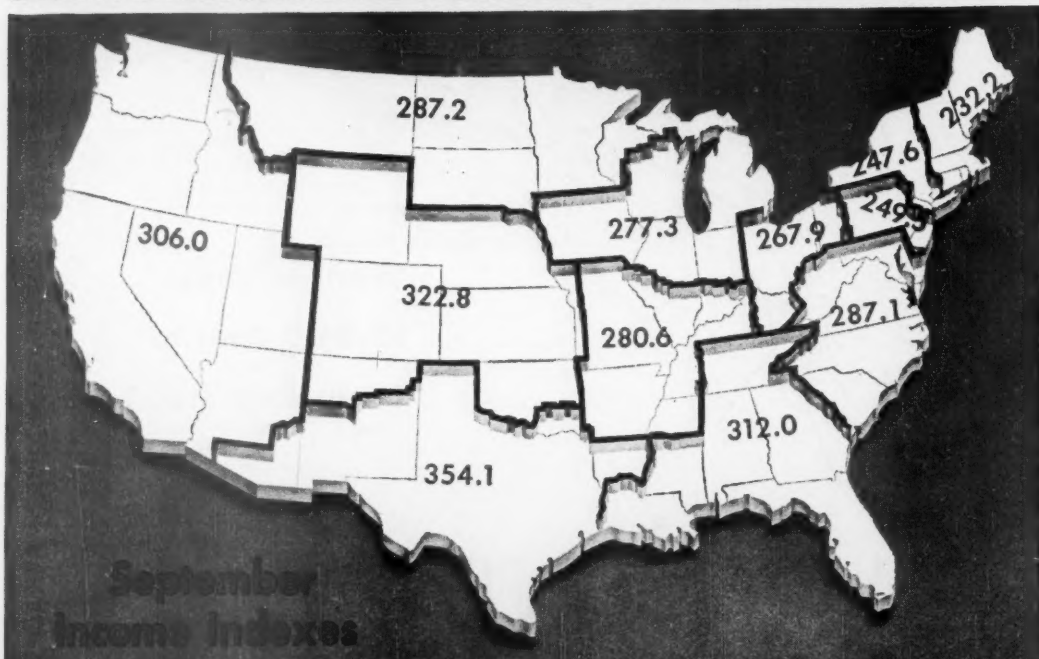
JACK & HEINTZ
Rotomotive
EQUIPMENT



© 1961, Jack & Heintz, Inc.

means electrical, hydraulic or mechanical devices designed to solve unusual problems of developing power, controlling it, or using it.

REGIONAL INCOME



Federal Reserve District	September 1951	August 1951	September 1950	Federal Reserve District	September 1951	August 1951	September 1950
1. Boston	232.2	232.5	209.9	8. St. Louis	280.6	280.4	261.0
2. New York	247.6	252.7	232.1	9. Minneapolis	287.2	291.1	272.8
3. Philadelphia	249.5	250.4	231.4	10. Kansas City	322.8	315.6	289.9
4. Cleveland	267.9	263.0	241.2	11. Dallas	354.1	353.2	320.2
5. Richmond	287.1	287.4	257.4	12. San Francisco	306.0	308.3	282.7
6. Atlanta	312.0	315.6	287.8	U. S. Composite	277.4	278.0	254.6
7. Chicago	277.3	275.8	253.1				

1941 = 100, seasonally adjusted
September figures preliminary; August revised

Income Uptrend Takes Brief Setback

Income declined in September, according to the national composite of BUSINESS WEEK's Regional Income Indexes—the first drop since October, 1949. The decline was small, however, —only 0.2%. And it was due principally to a couple of quirks; thus it does not indicate any real break in the steady upward march of income.

• **Holdback**—The first of the quirks involves farm income. Primarily because of price factors, farmers held back from market a lot of beef cattle and a lot of cotton that would normally have been

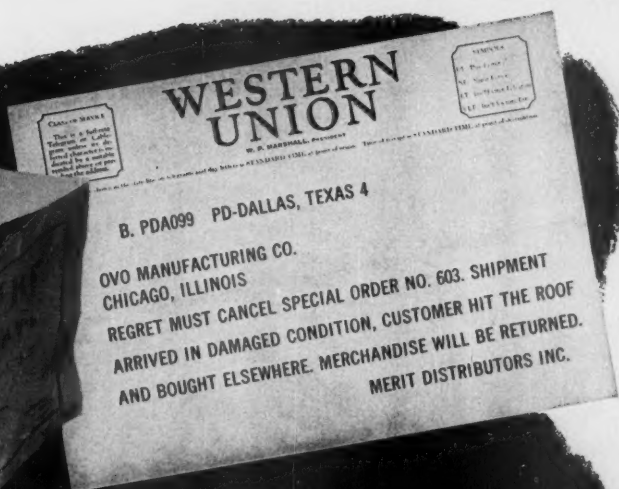
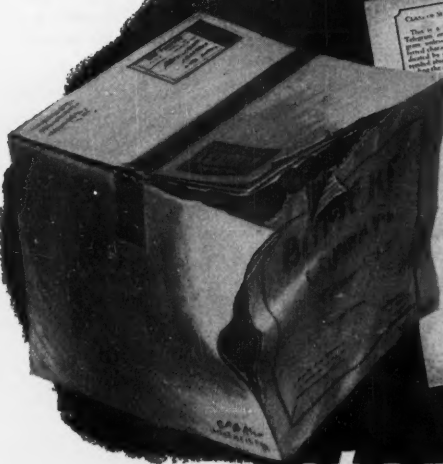
marketed in September. Some of this holdback is now being made up by larger marketings, which started late in October. That should give an upward push to the November income figures.

The second quirk is a seasonal factor. For most soft-goods industries, the autumn months are a time of sharply rising volume. Their production goes up, and their payrolls go up, and that means rising income all along the line. This year it just hasn't happened. In most cases there has been no rise at all; when there have been any, they've been

far smaller than normal. Since the income indexes are adjusted for normal seasonal variation (if they weren't, you'd never be able to make any sense out of them), a less-than-normal rise shows up in the indexes as a decline.

• **Ups and Downs**—Poorest showings have been made by the textile and apparel industries. Since they are relatively more important in the economy of the East, it's not surprising that all five of the East Coast regions show a decline in income in September.

By far the largest increase in income



soon you can **stop worrying**
and start shipping!

Via **Unicel** ... the revolutionary
new freight car

**3 VERSIONS OF ANOTHER GREAT FIRST
BY PRESSED STEEL CAR COMPANY!**

UNICEL Box Car

First class undamaged travel for most products. UNICEL is easier to load, easier to clean, and easier on your goods!

UNICEL Ice-Bunkered Car

Ideal answer to the great need for an efficient ice-refrigerated car! Keeps produce fresh and resists brine corrosion. UNICEL is easier to load, easier to clean, and easier on your goods!

UNITEMP Mechanically Refrigerated Car

Space between outer and inner walls forms surrounding "envelope" through which cold air circulates. 100% safety, with two mechanical refrigerating units to maintain constant, controlled temperature. Produce can be pre-cooled. UNITEMP is easier to load, easier to clean, and easier on your goods!

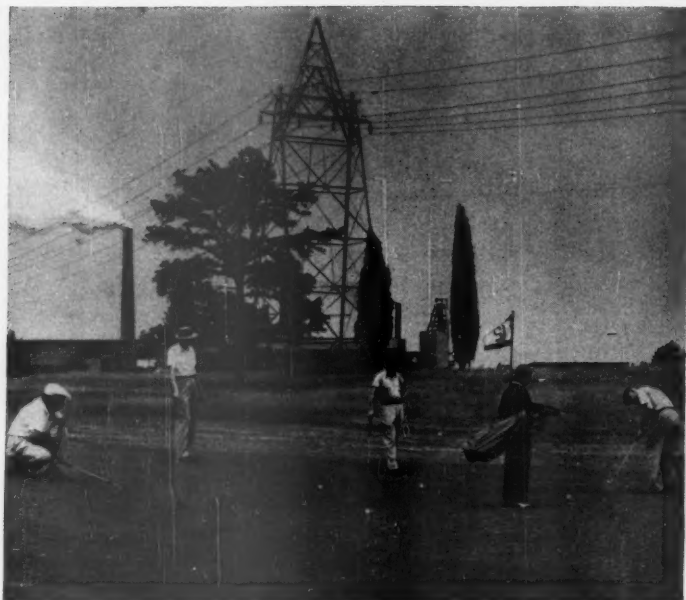


Thoroughly and successfully pre-tested, UNICEL is now undergoing final official road tests on one of the nation's largest railroads. UNICEL, designed for YOU . . . to afford *YOUR* goods the greatest protection in transit . . . to eliminate worry about *YOUR* good name at the receiving end . . . utilizes the modern construction principle of molding all parts into a single integrated unit. UNICEL, because of its unique cellular laminated construction, is **ACTUALLY LIGHTER, STRONGER AND MORE DURABLE THAN ORDINARY STEEL CARS!**

Gruelling road tests have proven that lading shipped in a UNICEL car receives **66% less road shock!** To add even more protection for *YOUR* shipments UNICEL provides these extra features:

UNISORB Floating Draft Sill, which effectively absorbs punishing impacts; UNISTRAPPING, a quick, easy and economical technique of metal strapping that really secures all types of loads.

For full information now — write: 
PRESSED STEEL CAR COMPANY, Inc.
6 N. Michigan Avenue, Chicago, Ill. • 230 Park Avenue, New York



Stonley Country Club at Badin.
Carolina Aluminum Company in background.

OF COURSE

... golf and industry have grown side by side in North Carolina, where ample room for work and for play is one of the industrial advantages of the Tarheel State's "Accessible Isolation."

Industry located in North Carolina enjoys the recreational facilities of a Variety Vacationland—an important factor in profitable production.

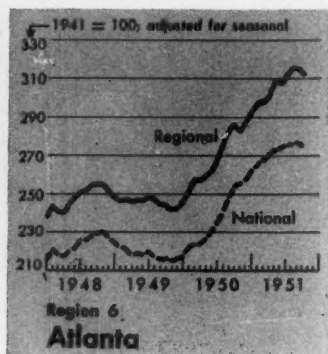
"Golf State U.S.A."—a pleasure guide for busy executives is yours for the asking.



Ask PAUL KELLY, Room B-3, Department of Conservation and Development, Raleigh, N. C., about sites and facilities suitable for your industry in North Carolina.



during the month came in the Kansas City region, where the index rose seven points, or 2.3%. There are two reasons: (1) Income was unusually depressed during August because of the floods; and (2) a rush of new business caused by rebuilding after the floods has boosted income even beyond the normal snapback.



MANUFACTURING activity has risen in the past couple of months, but far less than seasonally.

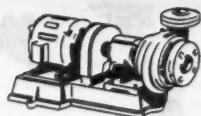
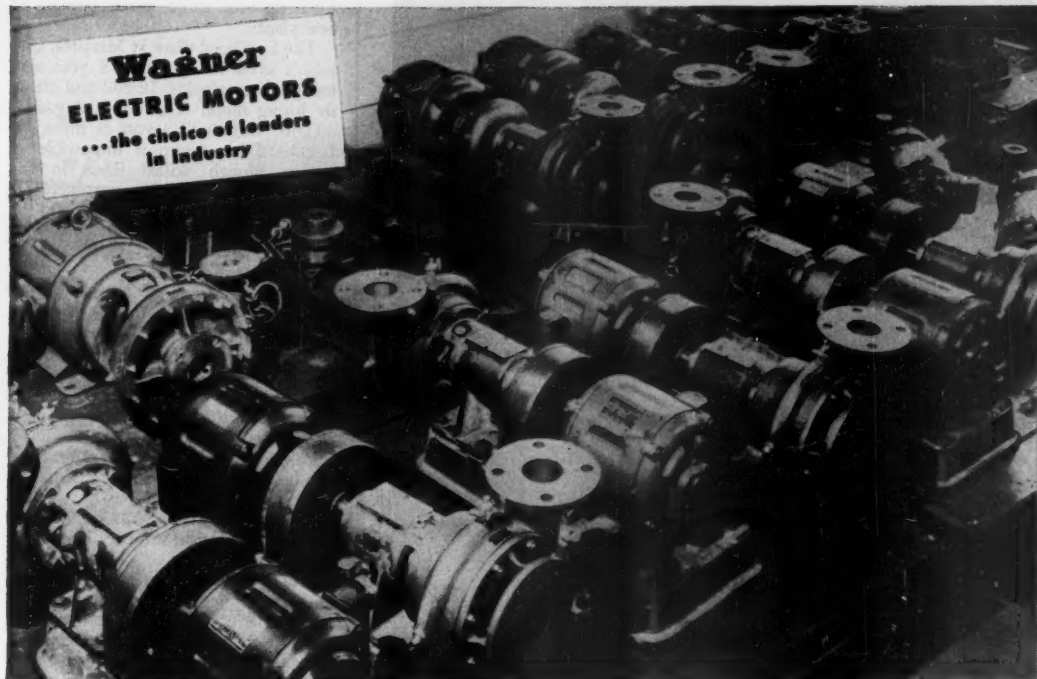
The greatest increases at this season normally take place in textiles, food processing, and apparel. The textile industry, most important of the three, has not turned up at all. Employment is well below year-ago levels—and even that doesn't tell the whole story, because more mills are on three- or four-day weeks than are on full time and the loss of income due to short work weeks doesn't show up in the employment statistics.

• **Price Jump**—Since early this month, the whole textile industry has been thrown into additional confusion. The Nov. 8 cotton crop report from the Agriculture Dept. estimated 1951 cotton production at only 15.8-million bales, a sharp decline from the estimate of a month earlier. The immediate result was a sharp rise in the price of raw cotton, and many mills withdrew entirely from the market, waiting for the price situation to stabilize.

The apparel industry is still in a slump, as retailers work off top-heavy inventories. But some manufacturers are hopeful. Orders have picked up at recent showings, they say, and that should mean a healthy upturn in activity in the next few months.

• **Heavy Industry Gains**—The region's heavy industries are doing much better. The steel industry around Birmingham has been going at top speed, except for the complete shutdown caused by the strike early this month. Chemicals show about a 5% increase in employment over a year ago; the paper indus-

Wagner
ELECTRIC MOTORS
 ...the choice of leaders
 in industry



for pumping hot—or pumping cold

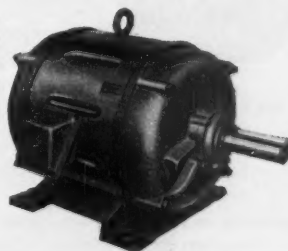
The Bell & Gossett Company, manufacturers of B & G Hydro-Flo Products for forced hot water heating systems and for refrigeration equipment, make thousands of pumps each year. The jobs of "pumping hot" for heating or "pumping cold" for refrigerating, have a lot in common. They both depend on electric motors for driving power.

The photograph above shows a group of B & G Universal pumps and Centrifugal pumps in production. B & G Pumps have a priceless reputation for dependability. It is significant that Wagner Motors are among those chosen to power them, and that Wagner Motors are

used on much of the industrial machinery in the Bell & Gossett plant.

For *your* requirements... there is a Wagner motor to answer every need for a standard type of electric motor in sizes from 1/125 to 400 hp... a complete line, both single-phase and polyphase, in a wide range of types and mountings.

Wagner engineers are qualified to specify the correct motor for your needs. Consult the nearest of our 31 branch offices, or write us.



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ELECTRIC MOTORS • TRANSFORMERS
INDUSTRIAL BRAKES
AUTOMOTIVE BRAKE SYSTEMS — AIR AND HYDRAULIC



in WIRE ROPE, too specialized use calls for the RIGHT KIND of muscle

Tough, wiry muscles stand the Rocky Mountain Bighorn in good stead; give him the sure-footed agility he must have to survive on almost impassable heights.

In wire rope, too, the right kind of muscle is mighty important... because different uses present different problems of wear and tear. Bending fatigue. Abrasion. Shock stress. Load strain. Each requires wire rope with the right construction and lay; the right grade of steel and size of wire to best withstand the destructive forces encountered.

Complete quality control from ore to finished rope; long experience and specialized know-how—these are your assurance that in Wickwire Rope you always get the proper combination of physical properties for long-lasting, reliable service on your particular job.



LOOK FOR
THE YELLOW TRIANGLE
ON THE REEL

THE COLORADO FUEL & IRON CORPORATION—Arlene (Tex.) • Denver • Houston • Odessa (Tex.) • Phoenix • Salt Lake City • Tulsa
THE CALIFORNIA WIRE CLOTH CORPORATION—Los Angeles • Oakland • Portland • San Francisco • Seattle • Spokane
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WICKWIRE ROPE



PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORPORATION

try is up even more, partly because of new plants.

The Lockheed plant at Marietta, Ga., wasn't even in operation a year ago; today it's employing 10,000 and steadily hiring more. The eventual goal is 30,000. But that's a year or more off. Lockheed has found it impossible to obtain enough skilled labor in the Southeast and has been actively recruiting as far away as New York—the first time, Georgians say, that any new company has ever had to go outside the area for production workers.

But this heavy-goods activity has not been enough to make up for the weakness in soft goods. Consumer goods industries are still relatively more important in the Southeast than in other parts of the country.

• **Big Resort Year**—Over-all economic conditions in Florida are very good. This past summer's resort business was the best in the state's history. Strongest spot in the state is Jacksonville; weakest is the Tampa-St. Petersburg area, where the important cigar industry is still in a slump.

Another strong spot in the region is eastern Tennessee, where considerable new construction, mostly for defense, is a strong prop under the economy. But all is not rosy—the slumping textile industry is an important factor in the state. And Alcoa has had to curtail operations at its plant outside of Knoxville because of low water, which cut its power supply.

The Augusta area is by far the strongest in the region, because of the AEC plant construction just across the river in South Carolina. Atlanta and Macon are other strong areas in Georgia.

Mississippi is perhaps the weakest part of the region; Jackson is worst off because of a sharp drop in its furniture industry.

• **Bright Spot**—Farm income is definitely the bright spot in the region's income picture. A combination of big crops and big prices has made 1951 a bonanza year for southeastern farmers. Take cotton, for instance. The Nov. 8 crop report, which so disconcerted the region's textile industry, was the best possible news for its farmers. Their crop was practically all in by then and had been fairly close to earlier estimates. So when the lower estimate came out, and prices jumped, the region's cotton farmers were in a perfect position to take advantage of it.

Corn yield was far above average throughout the region. But acreage was much smaller than last year because of switching to cotton. So the corn crop is below last year's, except in Georgia and Florida. The smaller corn supplies combined with a smaller hay crop mean that livestock farmers are in danger of being squeezed by lack of feed.

Florida expects a record citrus year:



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greater
office
efficiency
at
John Hancock



John Hancock Mutual Life Insurance Company's new home in Boston—Recipient of the "Office of the Year" award.

... includes Remington Rand modern business machines

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For FREE literature about these time, work and money saving machines visit your nearest Remington Rand Business Equipment Center or write Remington Rand, Room 2304, 815 Fourth Ave., New York 10.

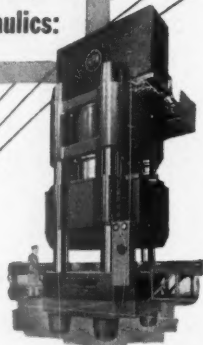


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In the aviation industry, specialized production problems in the forming, stamping, or drawing of metal parts are constantly being solved by the application of H-P-M "all-hydraulic" Presses. The list of aircraft frame and engine builders, who are among the hundreds of H-P-M users throughout industry, is visible proof of this statement. Indeed, in every industry where metal working is a part of the manufacturing picture, you'll find H-P-Ms at work. And if die casting or plastics molding is a part of your operation, there are H-P-Ms for these processes also. Check into H-P-M's broad line of production presses today for a profitable solution to your manufacturing problems.



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- Makers of Presses for the Metal Working and Processing Industries
 - Plastics Molding Presses
 - Die Casting Machines
 - Hydraulic Pumps, Valves and Power Units

The orange crop is forecast at 72½-million boxes, compared with an average of 46-million. Louisiana's citrus crop will be only about 15% of normal because of the damage done to the groves by last year's freeze.



EVERYBODY in the seventh Federal Reserve District has been certain for the past three months that business is just about ready to turn the corner and start upward—but the corner has still not been reached.

Over-all, there have been no marked changes in activity, either up or down. The usual fall business improvement has not showed up. Defense output is rising, but only just about enough to offset cutbacks in civilian-goods production caused by material shortages and the like.

• **No Labor Shortage**—Employment generally is steady—gaining a little, perhaps, but not enough to make the over-all labor market tight except in a couple of areas. Most important of these are Rock Island-Moline-Davenport, on the Iowa-Illinois line, and Indianapolis.

Labor is gradually getting tighter in Chicago, but so far employers haven't been hurt much. It's the same skilled groups, including engineers, tool and die makers, machinists, and skilled office help, that continue short. Production workers are readily available.

Most other cities in the region—including Milwaukee, Madison, Des Moines, Peoria, Springfield, and the heavy-industry cities of northern Indiana, are steady.

• **Trouble in Detroit**—The outstanding exception is Detroit, and, to a lesser extent, other cities in Michigan. Unemployment in Detroit is now officially estimated at 100,000. And even that doesn't tell the whole story, because the official figures don't reflect the temporary layoffs and the short work weeks that are so common today throughout the automobile industry. Parts producers who build for original equipment have been particularly hard hit. Their volume is off 30% and more, and they're working four-day or shorter weeks with reduced work forces. The auto makers themselves have also been

(Advertisement)

Louisiana's Dynamic Statistics

Industries that have found Louisiana to be the most versatile state in the nation are now reaping rich harvests. It is the market that counts largely in business—and Louisiana offers to industry an extensive domestic market as well as rich and quickly accessible foreign markets.

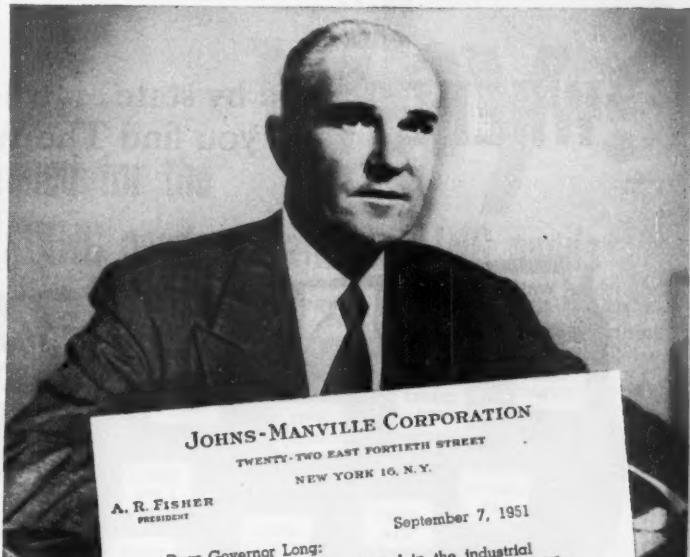
Along with market opportunities, Louisiana with her vast and varied natural resources, her almost limitless supply of gas and her cheap power is the source of raw materials for the manufacturers of innumerable products. Nationally recognized concerns, like the Johns-Manville Corporation, have long prospered in Louisiana, and have themselves played an important part in the industrial development of the state.

LOUISIANA AND U. S. STATISTICAL COMPARISON

Louisiana		% Increase	
1940	1950	LA.	U. S.
Income Payments to Individuals \$1000			
847,000	2,889,000	232	186
Per Capita Income, Dollars			
359	1,945	192	150
Net Salaries & Wages \$1000			
542,000	1,755,000	224.3	195
Effective Buying Income \$1000			
789,800	2,640,464	234.3	169.2
Cash Rec. From Farm Mktg. \$1000			
92,857	319,993	244.6	235.7
Cash Rec. of Livestock & Prod. \$1000			
26,093	100,185	283.9	216.5
Construction Contracts Awarded \$1000			
70,066	311,198	344.1	262.1
*Value of Mineral Production \$1000			
136,544	616,245	351.3	151.9
Value of Manufactured Prod. \$1000			
565,265(1)	2,499,000	342.3	286.4
Population			
2,363,890	2,683,516	13.5	14.5
Retail Sales \$1000			
495,405	2,402,200	384.8	206.3
Life Insurance Sales \$1000			
62,471	181,605	196.7	150.3
**Bank Deposits \$1000			
579,200	1,835,400	216.8	130.7
**Bank Assets \$1000			
583,200	1,949,708	234.3	149.6
Value of Exports (at N. O.) \$1000			
223,354	765,500	242.7	75.8
Value of Imports (at N. O.) \$1000			
101,259	512,400	424.7	196.9
Rev. Freight Orig. 1000 Tons			
15,042	22,310	47.6	35.0
Rev. Freight Term. 1000 Tons			
15,602	26,363	68.9	27.5
Total Elect. Energy Prod. M. KWH			
2,613.1	6,950.4	165.9	115.6
Total Electric Customers			
314,545	670,917	113.3	49.0
*No. of Farms Electrified			
18,301	115,300	503	130.6
Crude Oil Production 1000 Bbls.			
103,584	209,116	101.8	45.7
(2) Nat. Gasoline & Allied Prod. 1000 Gals.			
296,074	860,863	190.7	117.9
Net Production of Natural Gas MCF			
414,000,000	915,798,000	121.2	107.8
*Salt Tons			
1,132,594	2,313,718	104	50.4
*Sulphur Tons			
543,004	1,134,185	108	35

*1949 **Dec. 31, 1950 & Dec. 31, 1940
(1) 1939 (2) 1942

How JOHNS-MANVILLE built Southern and World markets through LOUISIANA



JOHNS-MANVILLE CORPORATION

TWENTY-TWO EAST FORTIETH STREET
NEW YORK 10, N. Y.

A. R. FISHER
PRESIDENT

September 7, 1951

Dear Governor Long:

Johns-Manville has participated in the industrial development of the south since right after World War I, its manufacturing operations growing from a small plant at Gretna, Louisiana, to a much larger operation at Marrero, Louisiana, and construction of additional plants at Jarratt, Va., and Natchez, Miss.

Johns-Manville maintains one of its most important divisional sales offices at New Orleans.

The materials produced at Marrero, Louisiana, which include Transite asbestos-cement pipe, asbestos-cement shingles, asphalt shingles and roofing, and cement shingles, along with building board roof cements and putties, along with building board produced from southern pulpwood at Jarratt and Natchez, are shipped by our New Orleans headquarters to points all over the South and to Latin America.

Our business development in Louisiana has been made possible by the continued helpful and enlightened attitude of local and state officials and our neighbors in the communities in which we operate.

While it has been profitable and pleasant to Johns-Manville to participate in industrial development of the area, it has also given Johns-Manville an opportunity to be of public service in providing jobs, payrolls and taxes that help sustain the communities in which we operate.

It is our sincere hope that Louisiana industry, government and the public working together as an economic team, can continue to set an example of free, competitive association to less enlightened areas.

Sincerely,

A. R. Fisher
A. R. Fisher



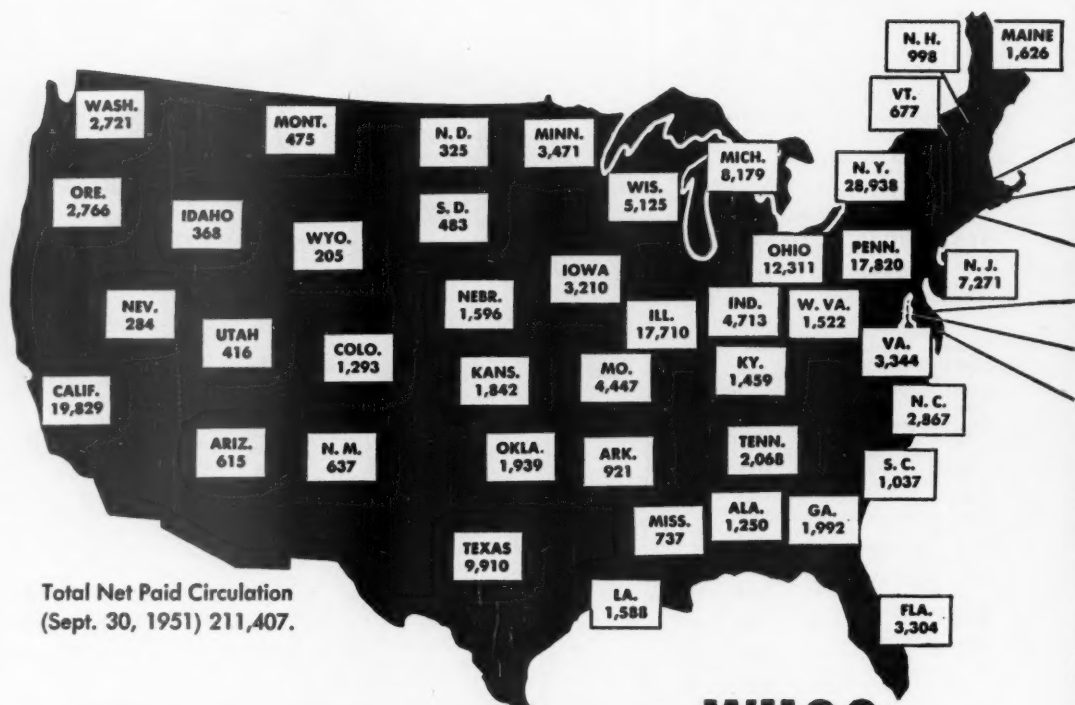
GOVERNOR EARL K. LONG

Louisiana

STATE BOARD OF COMMERCE & INDUSTRY, BATON ROUGE, LA.
JOSEPH C. HERBERT, EXECUTIVE DIRECTOR

largest national circulation of

WHERE? State by state... wherever you find business you find The Wall Street Journal



Here is The Wall Street Journal's business-news gathering network... the world's largest. Shown above are The Journal's 17 U.S. and Canadian news bureaus (staffed by nearly 200 business-news specialists), its 96 correspondents in other important news areas... the private wire system providing constant contact between points of news origin and The Wall Street Journal's four printing plants.

● NEWS BUREAUS ● CORRESPONDENTS
— DIRECT NEWS WIRE SYSTEM



Wall Street Journal publishing plants in four of the country's major regions produce and distribute the complete news-fresh product... the National Business Daily... achieving date-of-issue delivery to more than 84% of its 211,407 subscribers.

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86,337 are Chairmen, Presidents, Owners and Partners of businesses!
21,075 are Vice Presidents!
47,729 are other company officers and operating executives!

If you advertise to

any daily publication in the U.S.A. why?

Perfectly proportioned for the
businessman's **READING** needs... and **SELLING** needs

MASS.
9,388

R. I.
1,891

CONN.
5,098

DEL.
897

D. C.
3,635

MD.
3,429

Only one publication is especially designed to provide all kinds of businessmen everywhere with what they must know daily.

The spot facts of business happenings... The trends and the probable or possible direction of those trends for the future... The day-to-day interpretation of business events...

Only The Wall Street Journal completely fills these essential reading needs on a national basis.

HERE IS HOW

With nearly 200 staff reporters and editors... working out of Journal news bureaus in 17 key cities... with special correspondents in 96 other cities... with the largest private wire system of any publication... with the output of every major press association... with a technique that sifts, sorts and summarizes... with an insistence on easy-to-read writing and typography... with printing plants in New York, Chicago, Dallas and San Francisco making delivery to more than 84% of its coast-to-coast readership on date of issue.

★ The Wall Street Journal's circulation is greater than is the national circulation of any other daily publication in the United States. And The Journal's circulation is solid businessman circulation... 211,407 strong!

The Wall Street Journal is the fastest growing business publication of the decade. It has created a new kind of business news audience because it has created a new kind of needed, useful business publication!

Advertisers, too, are discovering what readers already know. The Journal is setting advertising lineage increase records that are being talked about!

With a 7-fold increase in circulation since 1941, there has been a 60% reduction in cost-per-thousand subscribers! When selling costs are climbing on every front, where else can you get more than twice as much for your advertising dollar now as you did in '41!

★ *No other complete business publication competes successfully with The Journal in reaching your prospect at his point of purchase... your point of sale... his office. That's where your advertising can convert an impulse into favorable action!*

★ *No other business publication can match The Journal's ability to reach your national market, whenever necessary, within hours after your advertising plans have jelled... no complicating delays, no long closing dates.*

★ *No other business publication except The Journal gives you the opportunity, whenever it's needed, to add extra regional impact to your national advertising copy by using different dealers' names or otherwise localizing your sales appeal for the 4 primary sales regions!*

★ *No other business publication offers such an ideal advertising format... with advertising benefiting from adjacent timely, lively news... and with wider columns—giving more see-power and sales-power even to small-space budgets.*

Dollar for dollar and ad for ad, no other publication can do the job for you The Wall Street Journal does every working day!

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head
your list!

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IN
ANY
OFFICE



You'll be surprised at the saving in time and money when you put this team to work. One girl and a Davidson will easily do all your office folding...monthly statements, form letters, bulletins, advertising literature, etc. The job will be done in a fraction of the time required for manual folding...without overtime...without upsetting office routine. And your mailings will go out on time. Any girl can operate a Davidson. Easily adjusted for the many different folds. It handles light and heavy paper and is sturdily built for lasting, trouble-free service. Even if you use it but once a month it will quickly pay for itself. Want details? Write for our interesting "Fact Book."

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The grinding department has them "stepping"!

More assemblers needed . . . and it's simply a matter of cause and effect. The cause—Simonds Abrasive Company Grinding Wheels. The effect—more production turned out faster. Put more "prod" in your production with Simonds Wheels. They're part of a complete line of grinding wheels in all shapes and sizes . . . accurately specified for every grinding job and made by Simonds Abrasive Company, a major grinding wheel producer for almost 60 years. Let a Simonds engineer discuss your grinding problem with you. No obligation. Write.



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EXECUTIVES — Simonds Abrasive Company's complete line has everything you need . . . grinding wheels, mounted wheels and points, segments and abrasive grain.

SIMONDS ABRASIVE CO. PHILADELPHIA 37, PA. BRANCH WAREHOUSES: CHICAGO, DETROIT, BOSTON
DISTRIBUTORS IN PRINCIPAL CITIES

Division of Simonds Saw and Steel Co., Fitchburg, Mass. Other Simonds Companies: Simonds Steel Mills, Lockport, N. Y., Simonds Canada Saw Co., Ltd., Montreal, Que. and Simonds Canada Abrasive Co., Ltd., Arvida, Que.

following the same trend. GM eliminated night shifts at its Flint plant; about 1,000 workers are affected.

Many other Michigan cities besides Detroit are affected by the auto slowdown, including Flint, Grand Rapids (because of the big GM stamping plant there) Saginaw, Lansing, and others. Grand Rapids has also been hurt this year by a decline in its important furniture industry; although the furniture business finally seems to be improving a bit, it is still below 1950 levels.

Two Michigan towns are expecting better things shortly—Manistee, where American Box Board Co. is doubling the capacity of its big plant, and Trenton, where the big new Chrysler engine plant will start operations soon.

• **Strong Points**—Throughout the region, the strongest industries are steel, machinery, metal fabricating, and defense work generally. The electronics industry is finally getting going on government work, and its TV business is reviving. Appliance makers are getting more heavily into defense work and are producing civilian goods up to the limit imposed by material restrictions. The farm equipment industry is also getting deeper into defense work. In addition, its cutback on regular lines has not been so severe as in autos and appliances. The shoe and apparel industries are both slow.

• **Farmers Prosper**—Farm income in the region is very high. The growing season that came to an end early this month has been one of the best in many years. But the biggest farm income factor has been the heavy production of livestock and livestock products at high prices.

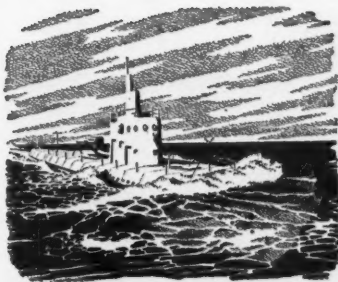
Until the early November storm and cold wave struck, the weather had favored farmers with their late harvests, had helped mature and dry a lot of corn, and allowed late grazing on the district's excellent pastures. The open, mild weather of October allowed the farmers to seed winter grain after the danger from Hessian Fly had passed, and the grain is up to good stands.

The corn crop was good and of good quality in Illinois and Indiana, but in Wisconsin and Iowa freezing weather stopped the maturing process prematurely. As a result, a lot of the corn is soft and chaffy and is being fed rapidly to avert spoilage. This means farmers in those states may have trouble stretching their feed supplies until the next crop is harvested. As a result, the district may have trouble maintaining its livestock next year.

The region's soybean crop was big, and practically all of it was harvested by Nov. 1, except in Iowa. There, the crop suffered considerable frost damage.

The harvest of dry beans, an important crop in Michigan, has been delayed by rain, and the crop will be only

How Honeywell Controls help dive a submarine only a few seconds after the order is given!



It's a tense moment aboard a U. S. Navy submarine when the signal for diving stations electrifies the crew. Within seconds everything must be "buttoned up"—if the ship is to submerge safely into hundreds of tons of sea water.

To make sure all diving preparations have been properly made, submarines are equipped with a special panel of colored lights like the one shown below aboard the *U. S. S. Silversides*. Navy submariners call it the "Christmas Tree," because when all valves and hatches are closed the whole panel glows green.

Important to the "Christmas Tree" are tiny switches, located throughout the ship. Many of these switches must be splash-proof and corrosion resistant.

But they all must never fail to operate.

That's why, in choosing the hundreds of precision switches found in every submarine, the Navy selects dependable, proven MICRO Precision Switches, a Honeywell product.

This important contribution is just one way Honeywell helps keep America strong. You'll find Honeywell Controls in hundreds of industries, too: in planes, trains, ships and buses. And in millions of homes, schools, hospitals and commercial buildings, where the familiar thermostat on the wall helps guard America's health and comfort.

This is the age of Automatic Control. And Honeywell has been the leader in controls for more than 60 years.



America lives better — works better — with Honeywell Controls

MINNEAPOLIS
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First in Controls

For information about automatic controls for ships, buses, trains and planes; for heating, ventilating and air conditioning; for industrial processing—write HONEYWELL, Minneapolis 8, Minnesota. In Canada: Toronto 17, Ontario.



GET big truck advantages at small truck cost with YALE WORKSAVERS



3,000 LB. NON-LIFT FORK WORKSAVER

Save

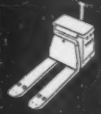
TIME AND SPACE
Move giant loads up to 185 feet per minute—with safe, easy speed control. Utilize all storage and production areas.

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Transport and lift capacity loads with a smooth flow of power that's easy on the operator, easy on the load.

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Mechanize handling on low-load floors; in freight elevator operations; and in other areas where weight or space rule out big trucks.



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YALE WORKSAVER Electric Hydraulic Lift Trucks are built for loads up to 6,000 lbs., and are ideally designed to accommodate skids or pallets. Their wide acceptance throughout industry is based on the YALE reputation for top performance in electric trucks of every kind.

GET AN EYE-OPENING DEMONSTRATION RIGHT IN YOUR OWN PLANT OR WAREHOUSE

Your YALE Representative will demonstrate the cost-cutting advantages of the rugged WORKSAVER line to you. All you have to do is name the time and place. Naturally, there is no obligation.

Be sure to ask about the famous WORKSAVER "package"—truck, battery, battery charger. The YALE Selenium Charger saves time by charging WORKSAVERS right on the job.

Choose from 5 Sturdy Work saver Models

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YALE is a registered trade mark of The Yale & Towne Manufacturing Co.

YALE GAS AND ELECTRIC INDUSTRIAL TRUCKS • YALE HAND TRUCKS • YALE HAND AND ELECTRIC HOISTS

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The Yale & Towne Manufacturing Co., Dept. 1411
Roosevelt Boulevard & Haldeman Ave., Philadelphia 15, Pa.

Cutting costs with YALE WORKSAVERS interests me, too.

- ☐ Please have your local Representative call on me.
☐ Please send me a free copy of the new WORKSAVER Catalog.

Name.....Title.....

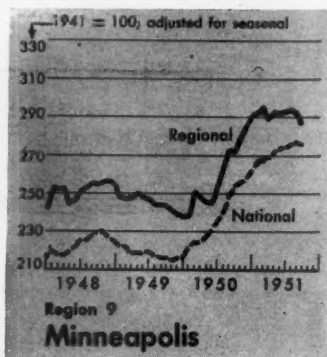
Company.....

Street.....City.....State.....

In Canada write: The Yale & Towne Manufacturing Co., St. Catharines, Ont.

about the same as last year's, which was less than average. The state's important apple crop was about 25% above average, but cold and rain slowed the picking, and high winds took a heavy toll.

The Wisconsin cranberry crop was bigger than average, but was some 20% below last year's. And the berries are smaller than normal because of cool weather in the growing season.



THE expected improvement in over-all economic conditions in this region hasn't materialized so far. Two conflicting influences seem to be at work. The farm income picture continues very bright. But activity in the urban areas is trending slightly downward.

Nonfarm employment is virtually unchanged from a year ago, which means that the region is lagging behind the country as a whole in this respect. Factory employment makes an even worse showing; several of the major industries, including food processing, textiles, apparel, and machinery manufacturing, show employment declines from a year ago. It's only because of a sharp rise in direct defense employment that over-all employment has managed to stay even with last year. Unemployment is low—because of substantial outmigration.

• **Mining Booms**—Mining activity has held at high levels all year. Iron ore shipments down the Great Lakes are running 20% ahead of 1950. But early cold weather is hampering end-of-season shipments; steaming of railroad cars to thaw out the ore so it could be loaded onto the boats started two weeks ahead of normal this year.

Copper Range Co. has just obtained a \$57-million RFC loan to develop its White Pine mine in northern Michigan.

Mine labor continues extremely tight in western Montana. One factor in the high mining employment—and a factor that is extremely important in the long-range future of the Montana economy—is the recent development of this "copper country" into a major zinc-producing area. Montana now produces more zinc than it does copper. And



"Those files were the best fire insurance we had!"

Though the building had gone down in flames, heavily insulated Shaw-Walker Fire-Files saved the heart of their business—their records.

Records of sales, contracts, orders, accounts receivable, essential correspondence...all in Fire-Files, survived the blaze to keep their business alive.

Both building and business were insured but time loss would have meant disaster...for in business today, time is the critical factor.

Equip your office with this practical point-of-use protection now. It will pay its way in peace of mind and in steps and minutes saved every day. Shaw-Walker has "time-engineered" 34 types of fireproof cabinets to keep records safe, ready to use in seconds, before and after fire.

And there are Shaw-Walker desks, chairs, filing cabinets, loose-leaf and

payroll equipment—everything for the office except machines—each completely "time-engineered" for the needs of every job and worker.

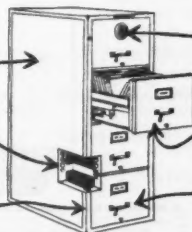
If you are setting up a new business

or merely wish to modernize worn, out-dated offices, make sure you use Shaw-Walker equipment throughout. It will help you make the most of every minute, every working day!

Time-rated, point-of-use protection saves steps—steps up production.

Each drawer an individual safe, insulated on all six sides.

Easy-operating drawers reduce fatigue. Free-coasting, float-bearing slides.



All Fire-Files equipped with locks—signal plunger or new manipulation-proof combination.

Foolproof latch on each drawer.

All around good looks—cast bronze hardware—well-proportioned, attractive colors.

Write for FREE BOOKLET

The booklet, "Time and Office Work," is packed with ideas for stretching office time. Organize now for greater sales effort and lower operating cost! A wealth of information on "time-engineered" office systems and equipment. 36 pages! Many color illustrations! Just off the press! Write today, on business letterhead to: Shaw-Walker, Muskegon 85, Michigan.



SHAW-WALKER

Largest Exclusive Makers of Office Furniture and Filing Equipment in the World

Executive Offices at Muskegon, Michigan
Branches and Exclusive Dealers in All Principal Cities

"Here's How We Keep This Asphalt Tile Floor Beautifully Clean at....

1/4 the FORMER MAINTENANCE COST"



Picture shows floor nearly 10 months after the first and only application of Multi-Clean Asphalt Tile Preserver.

**WITH THE
MULTI-CLEAN
METHOD**

"We used to wax this floor on an average of twice a month; now we apply Multi-Clean Asphalt Tile Preserver only once a year and always have a clean, beautiful, non-slip floor," says the floor maintenance director at Griggs, Cooper & Co., St. Paul, large mid-western food processing firm.

THE MULTI-CLEAN METHOD on this company cafeteria floor is saving between 15 and 20 hours of maintenance time a month, and material costs have been cut from \$200 a year to \$30. The floor, which is 6 years old and in constant daily use, has been given a new look and longer life with Multi-Clean Asphalt Tile Preserver.

Ask the maintenance men and they'll tell you, it's easier now to keep the floor clean and control scuff marks. The daily routine of sweeping, wet mopping and polishing with a brush under a Multi-Clean floor machine has not been changed, they say, but, "the dirt comes up easier and the floor stays clean longer." Once a week the floor is burnished with a steel wool disc under the floor machine to eliminate scuff marks and restore the original color and beauty to the surface.

Want to hear more about this amazing floor treatment . . . how it will beautify your floors and save you money in your floor maintenance program? Just fill out and mail the coupon . . . Do it now!

The Multi-Clean Method is a planned and tested procedure including the use of proper materials and equipment with their correct application for all types of floors and floor conditions.



Multi-Clean Asphalt Tile Preserver



Multi-Clean Floor Machine

Multi-Clean Wet-Dry Vacuum



Every Multi-Clean Product carries a 100% Guarantee!

FREE! FLOOR MANUALS

Each for the proper care of a specific floor. Check the coupon for the manuals of your choice.

MULTI-CLEAN
PRODUCTS, INC.

MULTI-CLEAN PRODUCTS, INC.

2277 Ford Parkway • Dept. BW-11 • St. Paul 1, Minnesota

Gentlemen—I would like to know more about the Multi-Clean Method for my floors. Send manuals I have checked.

- | | | |
|--|---|---|
| <input type="checkbox"/> ASPHALT TILE | <input type="checkbox"/> CONCRETE | <input type="checkbox"/> RUBBER TILE |
| <input type="checkbox"/> WOOD | <input type="checkbox"/> TERRAZZO | <input type="checkbox"/> LINOLEUM |
| <input type="checkbox"/> 9-108 FLOOR MACHINE | <input type="checkbox"/> WET-DRY VACUUM | <input type="checkbox"/> ALL-PURPOSE SCRUBBER |

Name _____

Address _____

City _____ Zone _____ State _____ 6-51

this year the state has passed Idaho to become the largest zinc producer in the West.

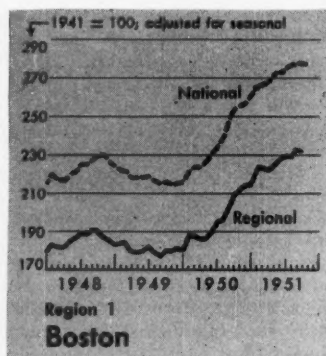
• **Payoff on Livestock**—Despite difficult weather conditions through most of the year, the farm income picture looks good. Most important factor in farm income in this region is livestock, and income from that source has been booming. Meat herds are larger throughout the district. Lured by the higher prices, farmers in every district state except Wisconsin are reducing their dairy operations in order to expand the production of meat animals.

The bad weather early this month found large amounts of spring wheat, flax, and sugarbeets still unharvested in the fields. Some of the wheat is a total loss; much of the rest will have to be sold at discounts because of poor quality. Despite the bad weather, however, over-all production of grain in the district this year will be close to a record.

• **Soft Corn**—The early freeze left the region's farmers with a lot of soft corn, which is being fed rapidly to avoid spoiling. Since the corn crop was only average in total size, it's doubtful that enough can be stored to provide a full year of feeding.

The soybean crop in Minnesota was huge—about 2½ times normal size. The crop was good in other states, too, but, except in Minnesota, soybeans are relatively unimportant.

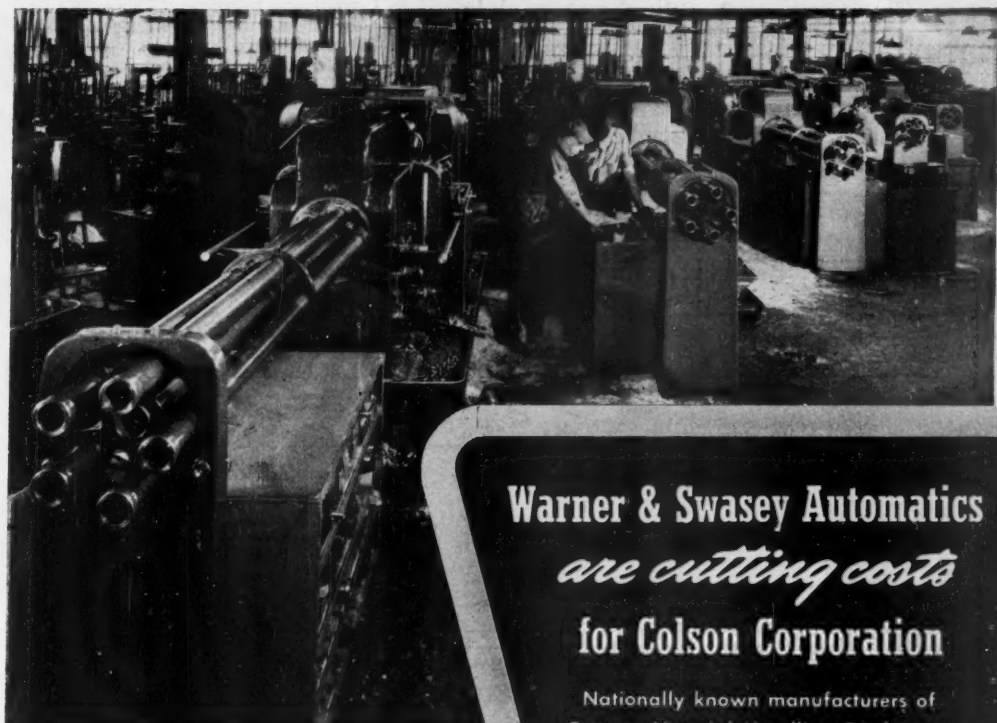
Wet weather threatened for a time to delay the planting of winter grains beyond the safe period. But it let up just in time, and most of the seeding was completed in time.



THE New England economy has held relatively stable in recent months. But the stability has masked some sharp differences among individual industries.

Dislocations caused by the shift from civilian to defense production are in the limelight. Manufacturers all over the region are feeling material shortages, particularly of metals.

• **Soft Goods Slow**—Plants working on military or defense-related orders are



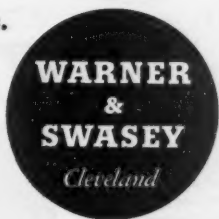
Five of seven Warner & Swasey 5-Spindle Automatic Bar Machines in operation at Colson Corporation, Elyria, Ohio.

Warner & Swasey Automatics
are cutting costs
for Colson Corporation

Nationally known manufacturers of
 Casters, Material Handling Trucks, etc.

THE COLSON STORY

- ★ Setup time cut more than 50% on new Warner & Swaseys.
- ★ Production up 7 to 8 times on lots of 500 to 10,000 pieces.
- ★ "Progressive" setups are much more practical on Warner & Swaseys.
- ★ Small lots are economically practical on this new CAMLESS Automatic.
- ★ Machine operators appreciate easy access and interchangeability of tooling.
- ★ Both management and operators approve—NO CAMS TO CHANGE.
- ★ Five repeat orders prove the profitability of Warner & Swaseys.



YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY



The 32-foot tidal fall left the merchant ship broken in two—high and dry. But the cargo, including a valuable shipment of carburetors, lay sodden in the holds. Yet, almost miraculously, these valuable parts which had been protected with Dearborn NO-OX-ID Rust Preventive packaging materials were in perfect condition . . . after a continuous 12-day salt water soaking.



**Know Your
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Engineer**

Since 1887, in thousands of ways, Dearborn products have aided American industry. The Dearborn Engineer knows how to prevent rust wherever it occurs. The Dearborn Engineer can also aid your power plant engineer in solving any problem involving water treatment. He will be glad to assist you in any way possible without obligation.

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**THE LEADER IN
WATER TREATMENT AND
RUST PREVENTIVES**

continuing to expand at a good rate, led by aircraft. But the soft-goods industries are sluggish. Heavy retail inventories and an uncertain price structure have been the chief causes of the prolonged weakness. Many manufacturers are marking time, waiting for the expected drop in inventories and the resulting pickup in orders.

The shoe industry, for example, is producing about 6% less than it did a year ago—and the decline would be much worse if it wasn't for military orders. Manufacturers are in a tight squeeze between rising material and labor costs on one side, and the unwillingness of buyers to pay even the current level of prices on the other.

Tanners, too, are in poor shape, because the shoe manufacturers overstocked last winter and have bought less than usual this year as a result.

Woolen mills were expecting a fall upturn. Generally speaking, it has not shown up. Retailers are still working off old inventories, and government orders have not been big enough to keep the mills busy. The wild price fluctuations in the raw-wool markets have further complicated mill owners' lives.

Cotton mills are in similar shape. Work schedules are already down, and lagging orders indicate still further cuts. Profit margins continue to narrow.

• **Metals Shortage**—The jewelry industry, particularly important in Rhode Island, is having its worst pre-Christmas season since the war. Employment is down more than 20% from last year. The industry had feared that its worst problem this year would be shortages of metals. It hasn't turned out that way. Retailers overstocked heavily last Christmas. As a result, new orders have been so low that most manufacturers have had enough metal in inventory to fill them. But the stocks will be about used up when the Christmas business is completed; from then on the industry will be forced to use substitutes for the most part. Some durable goods have been hurt, too, by material shortages. Connecticut's copper and brass industry is still on short work schedules. Automobile assembly plants have cut employment a little; larger cuts are expected.

One exception to the general weakness in consumer goods is the furniture industry. Evidently, retail inventories have been largely worked off, for orders have been increasing steadily over the past couple of months. Several plants are running overtime, and are booked through January.

• **Layoffs**—The civilian goods weakness has resulted in layoffs throughout the region. But extensive hiring by defense plants has made up for these layoffs—and more than made up in some areas.

The aircraft industry is leading the parade. Pratt & Whitney expects to

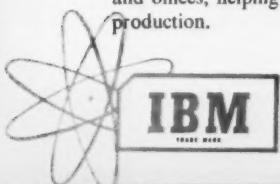


150 Extra Engineers

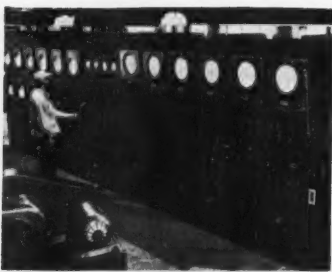
An IBM Electronic Calculator speeds through thousands of intricate computations so quickly that on many complex problems it's like having 150 EXTRA Engineers.

No longer must valuable engineering personnel . . . now in critical shortage . . . spend priceless creative time at routine repetitive figuring.

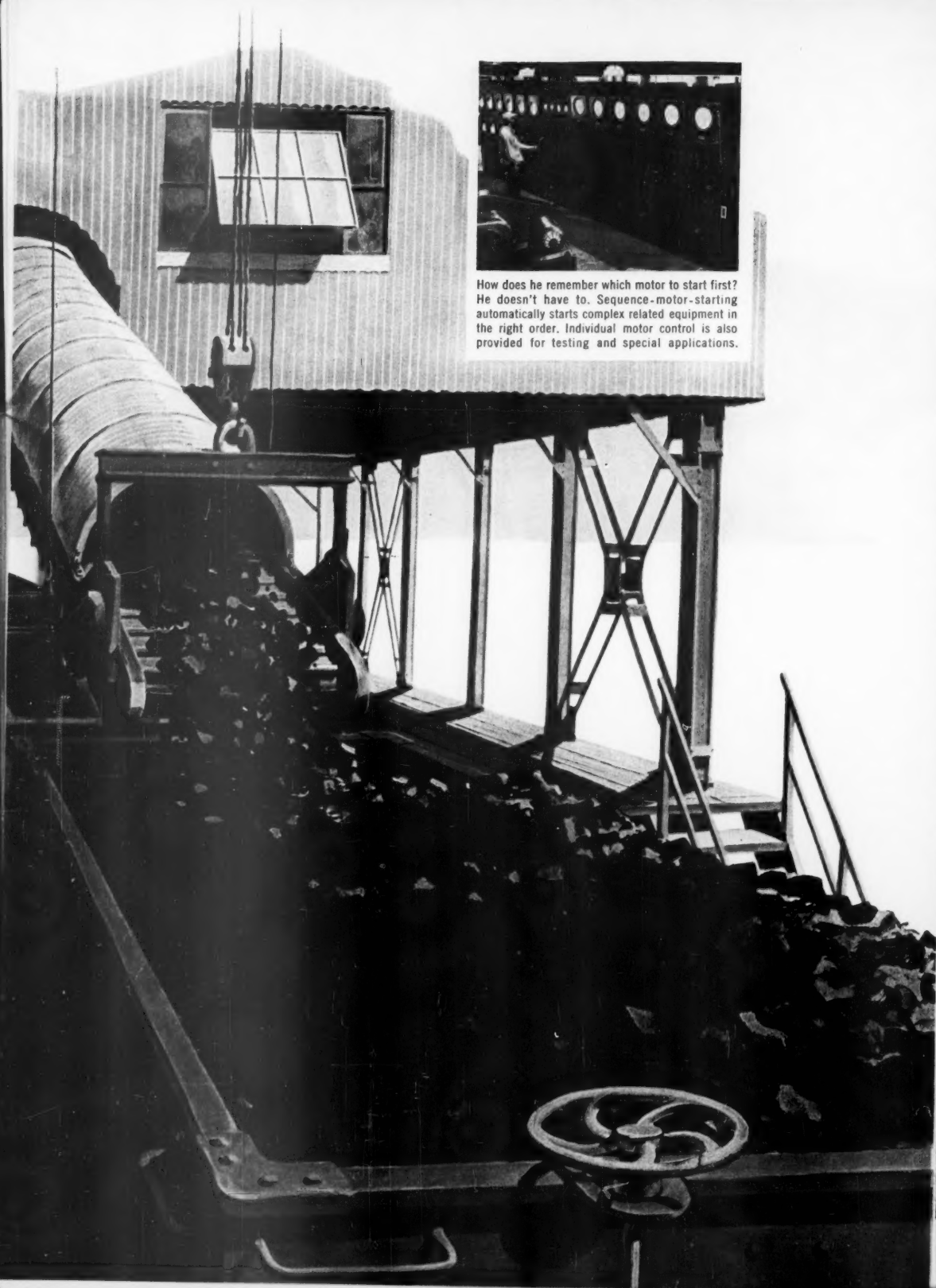
Thousands of IBM Electronic Business Machines . . . vital to our nation's defense . . . are at work for science, industry, and the armed forces, in laboratories, factories, and offices, helping to meet urgent demands for greater production.



INTERNATIONAL BUSINESS MACHINES



How does he remember which motor to start first? He doesn't have to. Sequence-motor-starting automatically starts complex related equipment in the right order. Individual motor control is also provided for testing and special applications.



They did

The fact that this coal operator* solved his production problems is not so important to you as the way he did it. He needed a faster, better way to clean, size and blend his raw coal into a grade suitable for use in making steel.

what

How he got this result is worth noting by a metal worker, a lumber man; by any executive who needs more production. He and his consulting engineers asked Westinghouse engineers for their ideas on an integrated electrical system. He wanted a complete cleaning plant installation, not just a quotation on electrical devices. His staff and ours worked out a system of many devices . . . motors, control centers, power centers and centralized control board. The new installation is faster, automatic, more productive. Result: the new plant, staffed by only 18 men per shift, now cleans 650 tons of high-grade metallurgical coal per hour. Cleaner coal means better coke, and therefore, better steel. Cleaning the coal eliminates much of the ash and sulphur, making a better grade coke, which in turn makes a better steel free from these impurities.

you can do

This example shows all industry the universal answer to today's greater production demands. It says that you solve capacity problems by applying capacity planning. We are asking to do this kind of planning with you.

to produce more

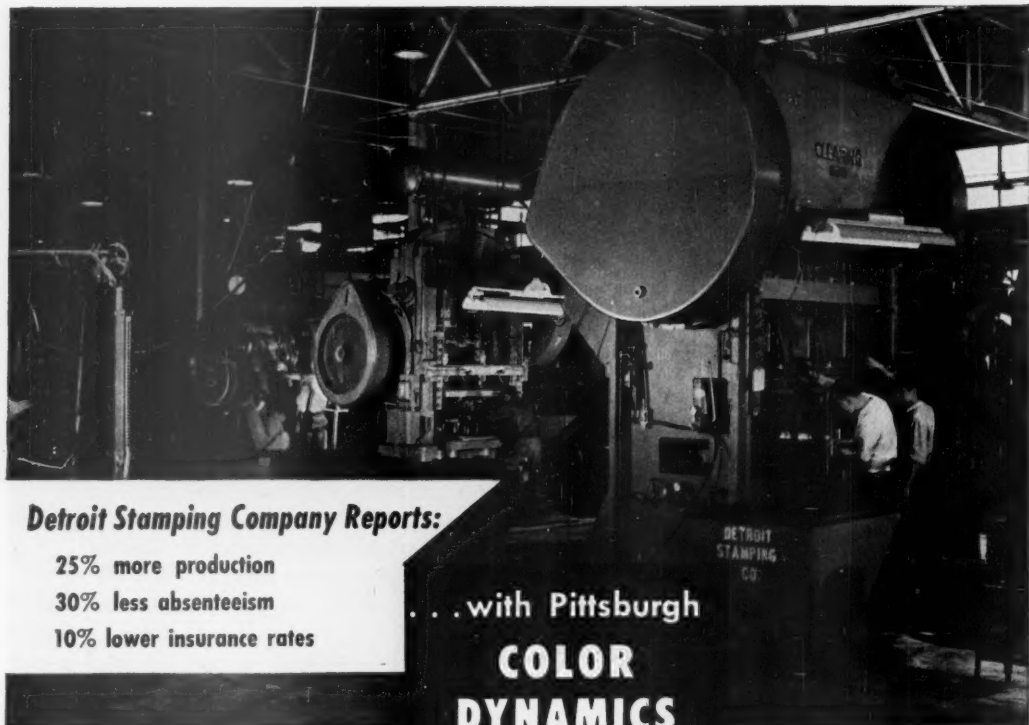
You can choose the exact devices later. It's how you put them together that counts . . . whether stokers, lighting, panelboards, generators or controls. Many manufacturers make good electrical devices. Westinghouse, in fact, makes a broader line than anyone else. But the priceless ingredient Westinghouse offers you, in addition, is the skill of broadly experienced engineers in putting together the right combination of good devices to let you produce more with what you have. Westinghouse Electric Corporation, Pittsburgh, Pennsylvania.

*name on request

YOU CAN BE SURE...IF IT'S

Westinghouse





Detroit Stamping Company Reports:

25% more production
30% less absenteeism
10% lower insurance rates

...with Pittsburgh
**COLOR
DYNAMICS**

Higher efficiency, better morale and greater safety are traced directly to use of modern scientific painting system

DETROIT Stamping Company is another example of how Pittsburgh COLOR DYNAMICS, applied in accord with good planning, can pay off—in greater production efficiency, better morale and improved safety.

● Three years ago this manufacturer of metal stampings and assemblies for motor cars and household appliances decided to apply COLOR DYNAMICS. An interior decorating scheme was adopted in accordance with the principles of the *energy in color*. An over-all treatment was chosen to give better lighting and, at the same time, produce a visible effect of order, cleanliness and efficiency. Functional colors were used on machines to make jobs easier to see and reduce accidents.

The benefits that have resulted to management and labor alike from Pittsburgh COLOR DYNAMICS are best expressed

by Harry C. Robeson, Plant Manager.

● "Since we repainted, according to COLOR DYNAMICS, the volume and quality of production have been increased 25 per cent without stepping up manufacturing costs", writes Mr. Robeson.

"Employees can see their work better than ever before. They don't tire as quickly, nor do they get hurt as much. We haven't had a serious accident since repainting. We were awarded special recognition in each of the past two years for our splendid safety record. As a result our insurance rates have been cut more than 10 per cent.

● "COLOR DYNAMICS has greatly improved morale, especially among our female employees, whose rest rooms were made more cheerful and pleasant. Absenteeism among all workers has been reduced 30 per cent.

"Our entire staff also takes greater interest and pride in plant cleanliness, simplifying our housekeeping problems."

How you can get a COLOR DYNAMICS Engineering Study of Your Plant—FREE!

Why not try COLOR DYNAMICS in your plant—on a machine or two, or in one department. We'll be glad to make a scientific color engineering study for you FREE and without obligation.

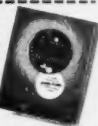
There's a trained color expert at each of our offices located in all principal cities. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have our COLOR DYNAMICS representative see you at your convenience. Or send the coupon below.

SEND FOR A COPY OF THIS BOOK!

Pittsburgh Plate Glass Co., Paint Div.
Department BW111, Pittsburgh 22, Pa.

☐ Please send me a FREE copy of your Booklet "Color Dynamics in Industry."

☐ Please have your representative call for a Color Dynamics Survey of our properties without obligation on our part.



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PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

add 6,000 workers in the next six months to its 25,000-man payroll at East Hartford; it will also need about 5,000 new men in North Haven when its new plant there is ready next February. Hamilton Standard will add several hundred in the next few months at East Hartford; it also has a new plant opening in the spring, at Windsor Locks. Kaman Aircraft, at Windsor Locks, is expanding its work force steadily.

• **Backlogs**—Machinery and machine-tool manufacturers are busy, with constantly growing backlogs in most cases. And the electrical equipment industry continues to expand steadily.

Shortages of materials are proving bothersome to many of these defense industries. But shortage of skilled manpower is a far more serious problem at the moment. This situation is most acute in the three southern states of the region; over half of the workers receiving unemployment compensation are women. Many firms are actively recruiting men in the northern New England states, New York, and Pennsylvania; several have instituted training programs for women.

The summer vacation season in the region was very good, particularly in Maine, where the gain over last year was 12%. The winter resort business, of course, depends largely on the weather, but resort areas and railroads are readying major promotion schedules.

• **Best Farm Year**—Even though a final count on the region's farm income is still a couple of months away, it's a sure bet that New England had one of the best farm years in its history. Farm income will top 1950's \$677-million by a wide margin.

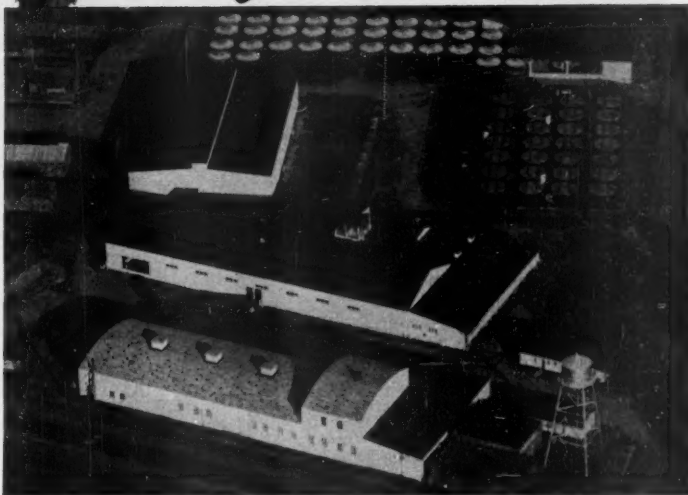
The poultry and dairy industries are both expanding. Milk production this year has been at a record high, and larger herds indicate that it will stay up for quite a while. Egg production has also been running well ahead of last year, because of larger flocks.

For both poultry and dairy men, the region's big 1951 feed crops are good news. The hay crop was unusually heavy. And in every state except Vermont, the corn crop is well above last year's. This is particularly important in view of the tight feed situation elsewhere in the country.

The region's potato crop is about 28% below last year's. Principal reason is the fact that farmers voluntarily lowered acreage, although yield was slightly lower, too. But with prices about \$3.75 a bbl.—nearly double the 1950 support price—potato areas should realize good income.

The 600,000-bbl. cranberry crop in Massachusetts was slightly below last year's, but close to 35% above the long-term average. And prices are considerably higher than they were last year.

How National Wood Tanks serve Willamette Cherry Growers



Willamette Cherry Grower's, Salem, Oregon. Notice the 77 National Wood tanks (upper right of photograph) for processing cherries.

EFFICIENT FOOD PROCESSING MADE POSSIBLE BY WOOD TANKS

Each year the Willamette Cherry Growers prepare between 3,000-5,000 tons of cherries for future processing. Speed is necessary in economically processing a large quantity of highly perishables such as cherries. The Willamette Cherry Growers have found that by replacing barrels with the large National Wood tanks, they could benefit from many economies in operation. This more efficient handling and storing of cherries has allowed them to save considerable time and money.

The National Wood tanks and pipe lines used by many other food processors* have also been custom-designed to reduce costs by solving their liquid storage or transportation problems.

Food Processors Write Today

Maybe National Wood tanks and pipe can help you lower processing costs. If you store or transport liquids, write today giving details of your operation. Our engineering staff will carefully analyze the details. If National Wood tanks and pipe can help you, we will work with your staff to design wood tanks and pipes to fit your special project.

You'll be pleased with the savings in time and money that you can make with durable National wood tanks and pipes.

* Names given on request.

Write for:
National Tank & Pipe Co.
2301 North Columbia Blvd., Dept. B
Portland 17, Oregon.

National

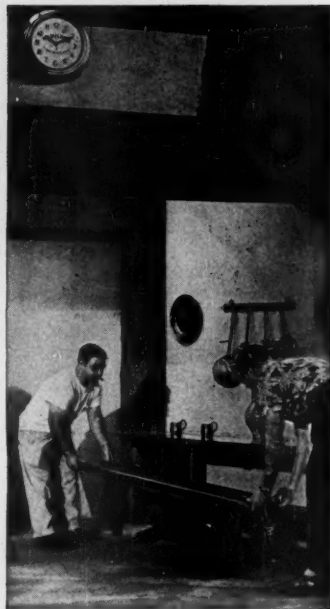
WOOD TANKS and PIPE

DIVISION OF M and M WOOD WORKING COMPANY

ENTERTAINMENT



BEFORE LUNCH: At 9 a.m. Jordanares get starting cue at Snader TV-film studio. They'll race the clock, make seven films by noon.



CREW CHANGES SCENE. In 10 minutes set is ready for second number . . .

Hollywood



AFTER LUNCH: Mary Hatcher, famed for role in musical, *Oklahoma!*, takes over spotlight. Her first number, naturally: a western piece with a cowboy quartet. She'll turn out five numbers by quitting time. Next comes . . .



CLANCY LOWERS THE BOOM. This number is polished off with dance variation, as the race goes on to . . .



BEAT THE CLOCK. Asst. director claps his board for seventh and last number, just under the line for noon break.

Cameras Grind Out Film Fare for TV

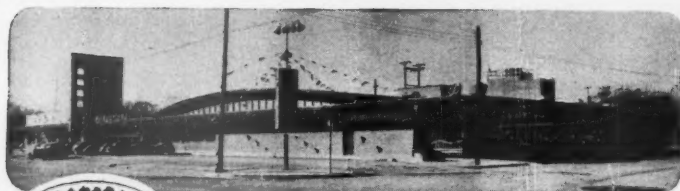
(Story begins on page 124)



ROMANTIC NUMBER for change of pace. Director poses Mary with co-star, as clock hands move on to . . .

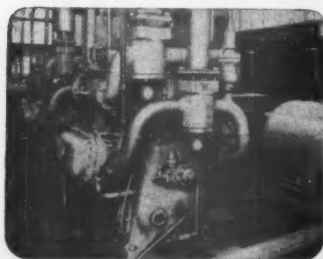


QUITTING TIME. Mary leaves studio with producer-boss Snader. Smiles show relief at end of hectic shooting day.



Air Conditioning Serves Gigantic Super-Market

Weingarten's store on Yale Street, in Houston, is one of the biggest in the country. The entire store is air conditioned with a Frick system, using two 9-cylinder NEW "ECLIPSE" compressors delivering 180 tons of refrigeration. Installation by Airflow Engineering Corp., Frick Distributors at Houston.



Two Frick 9-Cylinder NEW "ECLIPSE" Compressors at Weingarten's Store

Frick equipment also serves the new Weingarten store on Alameda Road, the Weingarten cold storage, the Shamrock Hotel, the Wm. Penn Hotel, and many other Houston businesses.

Perhaps you could use Frick air conditioning, refrigerating, quick freezing or ice-making equipment in YOUR business. Write now for quotations.

FRICK CO.
DEPENDABLE REFRIGERATION SINCE 1892
WAYNESBORO, PENNA. U.S.A.
Also Builders of Power Farming and Sawmill Machinery

SAVE WORK



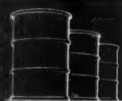
SAVE MONEY



SAVE MINUTES



SAVE MATERIALS



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Today

the chemical principle of pH control—pioneered by Kelite—is helping scores of industries to clean and process scores of products better, quicker and with welcome economy.

Why not discuss your cleaning or industrial processing problems with a Kelite Service Engineer? He is an expert in the application of pH control to achieve better results with greater economy. No cost—no obligation.

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629 Grove Street

"... would-be producers are setting up shop right and left ..."

TV FILMS pictures start on p. 122

To oldtimers in Hollywood it looks as though the early days of movie making are here again. Cameras grind furiously in ramshackle barns, converted garages, makeshift studios. There's no mistaking it: A new rush to make movies is on. Only this time it's movies for television.

What's behind all this feverish activity is the experts' belief that, even with the coaxial cable and microwave, a large percentage of television fare will shake down to film.

• **Come One, Come All**—The established motion picture studios aren't the only ones making TV films. Dozens of would-be producers are setting up shop right and left. It might be no more than a desk and a telephone, but they're open for business.

That's not very much capitalization. So the mortality rate is bound to be high. But some impressive success stories are already floating around. Some producers who started more or less humbly only two years ago are in the chips today.

• **Filled the Gap**—One of them is ex-musician and real estate man Louis D. Snader, who churns out hundreds of films a year to feed the great maw of television. Snader's bonanza is no accident. It's the result of good business sense and plenty of endurance. For one thing, Snader recognized and skirted the early mistakes of movie pioneers. Then he developed a slick, mass production system.

Snader got off to a good bread-and-butter start two years ago with his Telecriptions, TV's counterpart to radio's disc jockeys. Snader scanned the television field and found there was no substitute for the major record companies—no organizations like Victor, Capitol, or Columbia to supply entertainment for television. So he set out to do something about it.

• **Small Beginning**—The first thing he did was rent a single room in Hollywood. In this modest studio he programmed a series of short 34-min. (record length) entertainment films, featuring vocal groups, orchestras, dancers, and other talent.

It wasn't long before Snader ran into interference. He bumped smack into James Caesar Petrillo, who was then campaigning for the rights of musicians on television. But Snader met the interference head on. He figured largely in setting up a plan for TV royalties, which resulted in the American Federation of Musicians' Performance Trust

INVESTMENT:
\$ 750,000

—permanently
protected
with
"Century"

CORRUGATED ASBESTOS-CEMENT SHEETS

Filter plant, Freedom Valvoline Oil Company, Freedom, Pa.
Roofing and siding are "Century" Asbestos-Cement Cor-
rugated. Erection Contractors: Elwin G. Smith & Company.

THIS modern filter plant of the Freedom Valvoline Oil Company, Freedom, Pa. is typical of the many progressive industrial plants throughout the nation where "Century" Corrugated Asbestos-Cement Sheets have been used for both roofing and siding.

The choice of "Century" Asbestos Corrugated is a logical one wherever quick application and maintenance-free service are desired. "Century" Asbestos Corrugated goes on quickly, inexpensively. The large-size sheets are exceptionally strong, but they can be cut and drilled easily—

fastened in place with a minimum of labor.

And the protection is permanent! "Century" Asbestos Corrugated resists weather; *can not burn*, rot, or rust. Rodents and termites can't hurt it. It doesn't even need protective painting to preserve it!

Whatever your building plans—new construction, modernization, expansion—get the cost-saving story of "Century" Corrugated Asbestos-Cement Sheets. We'll gladly send complete data on request.



Nature made Asbestos...

Keasbey & Mattison has made it serve
mankind since 1873

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IN CANADA: ATLAS ASBESTOS CO., LTD., MONTREAL, TORONTO, WINNIPEG, VANCOUVER

Announcing the



Family of GAS TURBINE ENGINES

Continental Motors, pioneer in power for business and utility aircraft, announces another major pioneering step—its purchase of the exclusive United States manufacturing rights to a series of gas turbine models developed by the Societe Turbomeca, under sponsorship of the French Air Ministry.

The agreement with Turbomeca, climaxing months of technical work, testing and negotiation, in this country and in France, brings to the United States a far broader and more diversified line of turbines, in the 200-to-1,100 h.p. range, than has been available heretofore. Characteristics forecasting their widespread use include:

Small size and low weight in relation to power.

Adaptability to all fuels, including those of low grade.

Long life expectancy due to absence of reciprocating parts.

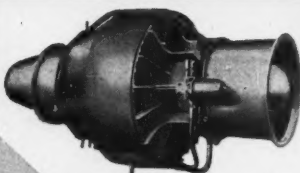
Minimum use of critically scarce materials in their manufacture.

A high degree of parts interchangeability among various models.

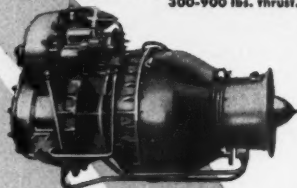
Versatility. Useful power is delivered in any of four different ways.

Continental Motors sees this Continental-Turbomeca family of engines as supplementing, rather than displacing, power plants of conventional design. The four basic models and their variations are expected to find wide acceptance, not only in military applications, but in many commercial fields as well.

The Continental-Turbomeca family of gas turbines has been exhaustively tested in actual use. Plans for manufacture soon will be announced. Meanwhile, inquiries are welcomed. Please address Continental Motors Corporation, 1500 Algonquin Avenue, Detroit 14, Michigan—Attention Mr. Whitney Collins.



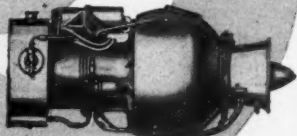
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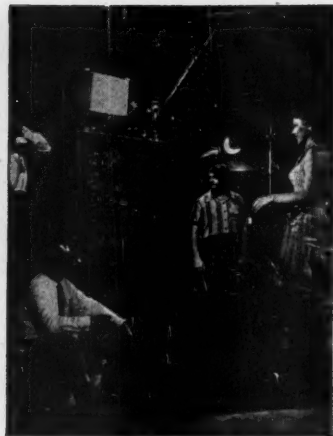
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BLACKBOARD PROP is no shame to stars who do six numbers in an afternoon.

Fund Number Two. All the major networks have since adopted it as their formula in dealing with AFM. Some sources give Snader credit for the blueprint; AFM says it was Petrillo's brainchild. But no matter whose idea it was, Snader's finger in the pie practically clinched his success.

• **Hand Over Fist**—By this time Snader was grinding out films like sausages. In the first 10 months he completed 400 of his 3- to 3½-min. musical films. His expenditures came to \$1,230,000, an average of a little more than \$2,500 a film. His second-year budget is more than three times as big, calls for \$4,340,000.

In all, the 400 short films added up to about 1,240 minutes, or 20.6 hours of film. That's equal to about 15 feature-length films from major studios.

Only one TV station in each telecasting area can subscribe to the Snader Telescription Libraries. They are being shown in 54 of the 62 recognized areas.

• **Bursting the Seams**—This quick success called for expansion. And Snader grew like Topsy—from a single room to a total of 39 rooms scattered around town, plus two four-room suites at General Service Studios and another suite at the Goldwyn Studios.

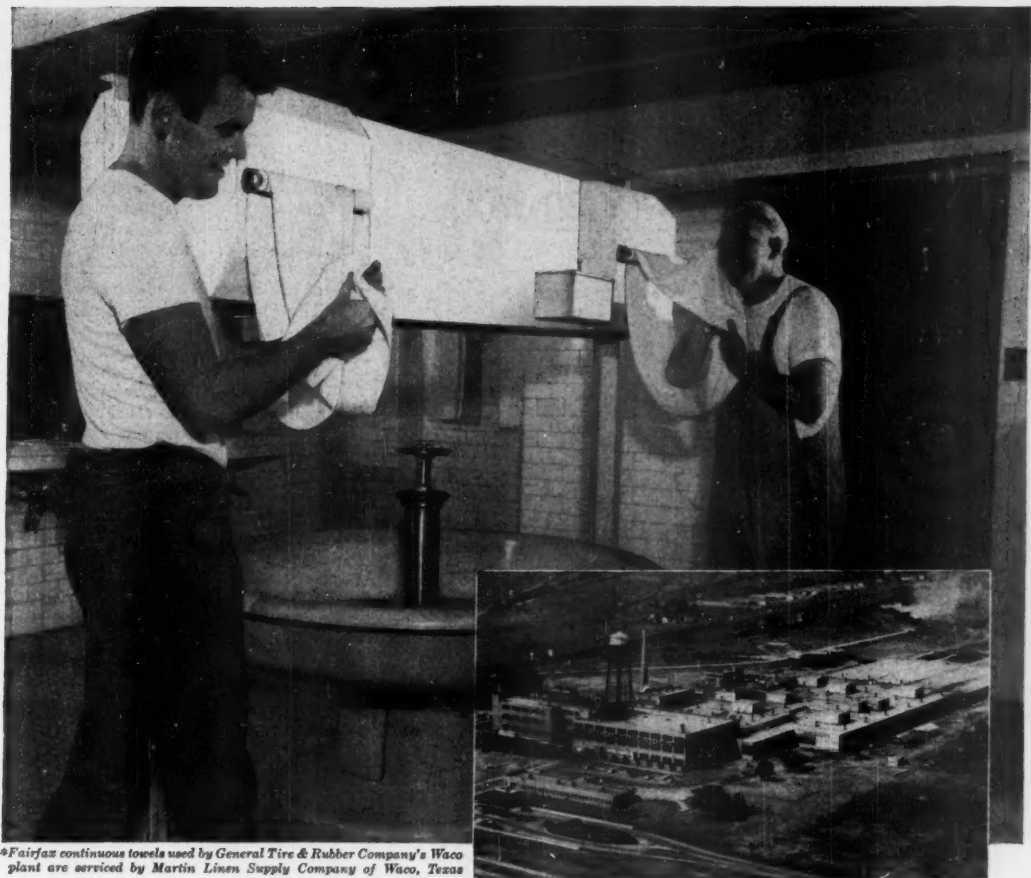
He also expanded his production, adding 400 more Telescriptions to his library. Then he began to produce half-hour films.

Now Snader is branching out even further, to national affairs. His newest enterprise is a national affairs commentary called Washington Spotlight. The films are kept timely and hit the TV stations five days after they are shot.

• **Experience Taught**—From the beginning Snader profited by mistakes made by pioneer movie makers. Early in the game, for instance, he set up a sales organization to push his product. He

Continental Motors Corporation

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formed Snader Sales, Inc., with Reuben R. Kaufman, Chicago advertising executive as president and partner. Snader Sales now has representation in 22 cities.

Through his sales organization, Snader acquired 14 British films for distribution to both theater and TV. He rents these pictures to motion picture theaters first, gives them a three-week protection period, and then leases them to television stations. And Snader is now financing and distributing a series of 78 (two a week) 15-minute programs. The film itself is turned out by Mor-ton TV productions.

But Snader is still not satisfied. When he really starts to spread his wings, he will try hour-long films. He wants to do opera, classical plays, and great American musicals.

• **Mass-Produced**—One big reason for Snader's success is the machinlike precision of his operation. Making movies for television, generally, is more streamlined than it is for theater movies. Television people ordinarily require only a day and a half to three days to shoot a picture that runs an hour or more. Motion picture studios would take three to eight weeks to shoot a comparable TV film, would require months to shoot a film that long for theater showing. Snader cuts shooting time to the bone, grinds out Telecriptions at a rate of 12 to 14 a day.

The clock is king at Snader's studios. Very often one performing artist will make six films in the morning, and another will do six more in the afternoon. On one typical day, a vocal group called the Jordanares made seven numbers before lunch: Mary Hatcher, a star of the musical *Oklahoma!*, turned out another five that afternoon.

• **From Grassroots**—Snader, born in Russia in 1897 and settled in Lincoln, Neb., in 1904, got his start in the movie business literally on the ground floor. As a child violin prodigy in Lincoln he played in concerts and sat in the pit with the first orchestral groups used for the epic film, *Birth of a Nation*.

His first venture in the movie business was in the real estate end of it. He bought and sold several small motion picture theaters, then expanded his holdings to the Midwest and the West Coast. At the same time he worked with various insurance companies.

After that he made a killing in Chicago real estate, then moved to California in 1937 to retire. But the war-time housing boom enveloped him and he went back to real estate. It wasn't until 1948 that he started to finance motion pictures, then backed the original Fireside Theater series for TV.

He is now president of the National Society of Television Producers, oldest organization representing producers of TV films.



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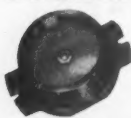


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Censorship—Private Brand

New TV code and movie incidents spotlight rise in censorship by private groups. Telecasters would set up sweeping standards to cover almost all aspects of programming.

To a great many Americans, censorship is an official at a roll-top desk, wielding a pair of long shears and exercising a somewhat puritanical conscience. Two things have happened in the past few weeks that reveal the outlines of a different—and in many ways more effective—kind of censorship.

- The television industry, acting as a private group, drew up a "code of ethics" that will impose major limitations on the type and content of video programs. The TV board of the National Assn. of Radio & Television Broadcasters is slated to vote on the code at a Washington meeting two weeks from now.

- A high state court upheld a ban on a foreign motion picture—a ban that was, to a great degree, the result of pressure from one private group of citizens.

In the light of what has been happening over the last couple of years, neither of these actions is unusual. But the two do point up dramatically a basic change that is taking place in the censorship of U.S. entertainment. That change is a move from direct, or government, censorship to indirect, or private, control.

- **Officials Persist**—The shift is far from absolute; in seven states and some 90 cities government censorship—particularly of films—is as firmly entrenched as ever. In Memphis actress Lena Horne is still banned from screens because she is "inimical to public health, safety, morals, and welfare." The film "Lost Boundaries" remains out-of-bounds in Atlanta (BW—Dec. 3'49,p23), with two federal court decisions upholding the censors (the U.S. Supreme Court refused to review the case on a technicality). New York State censors still have the full legal power to bar, as they did last week, films like "La Ronde."

But in the last year, there have been fewer instances of this official censorship. What has been on the rise has been private control—censorship by the entertainment industry itself and by racial, political, and religious groups. And the TV code is part of this.

- **No Precedent**—In drawing up the code, the television industry is doing something radio never did: It is spelling out a single standard of behavior that could apply to the great majority of U.S. commercial stations. True, the code is voluntary; stations can subscribe to it or not. But the feeling is that few

telecasters would risk losing prestige in the public eye by not subscribing and showing the official seal of approval.

The code is actually the result of three things: (1) A mounting number of protests from the public about things like low necklines, off-color jokes, and the like; (2) The effect of "Red Channels," a publication that purported to show Communist infiltration of radio; and (3) a proposed bill by Sen. William Benton (D., Conn.) to set up a National Citizens Advisory Board on Radio & Television to study and make recommendations on radio programming. The Benton bill is looked on by the industry as opening the door to government regulation of program content. (Its supporters see no threat of censorship, view it solely as a means of ensuring high-quality public-service programs.)

- **Strict Discipline**—By taking matters into their own hands, the telecasters hope to quiet both the public and Congress (possible state control over TV has been ruled out by the courts). Here are some of the things they would outlaw, in what amounts to an extremely stringent set of rules: profanity, obscenity, smut, and vulgarity; attacks on religion and creeds; casual treatments of divorce; exhibitions of fortune telling or astrology; camera angles that emphasize anatomical details indecently.

Officers of the law would have to be portrayed with dignity and respect; the use of liquor in American life, except for plot or proper characterization, could not be shown. Due care would have to be exercised in developing programs "to foster and promote the commonly accepted moral, social, and ethical values of American life."

- **Delay**—There have already been so many objections to the code that its final adoption may be delayed beyond the planned Dec. 5-7 meeting. Within the industry, the main protests are that some of the standards are based on general platitudes, that there are serious antitrust dangers, and that by setting up an enforcing board, the industry would, in effect, create a kangaroo court.

The strongest objections from outside come from people who are opposed to any form of precensorship, who believe that the right to judge should be left with the audience itself. Their stand is that the Federal Communications Commission already has adequate police power over programs through its licens-

ing authority. Any new code, they say, would simply vitiate television, inevitably causing it to lose touch with reality. Since these outside protests are mainly unorganized, however, there is little chance that they will stop final passage of the standards.

• **Movies**—In movies, private censorship has been an accomplished fact for years through the operation of the Motion Picture Assn. of America. In the past months, though, there have been new signs of a different sort of private control—censorship by racial or religious groups.

The film "Oliver Twist" ran into an unofficial blockade by movie exhibitors until some allegedly antisemitic scenes were cut. Hollywood's version of "Streetcar Named Desire" had to be trimmed to win the stamp of the Roman Catholic Legion of Decency. But the most notable case was one involving a foreign film, "The Miracle," in the State of New York.

• **On Again, Off Again**—"The Miracle" was part of a trilogy called "Ways of Love." It told the story of a mentally unbalanced peasant girl who is seduced by a stranger whom she believed to be St. Joseph. When she bears a child, she thinks it has been miraculously conceived.

The film was approved by the New York Education Dept.'s motion picture division and opened in New York City in late 1950. It was immediately picketed and attacked by members of the Roman Catholic Church. Cardinal Francis Spellman urged Catholics to boycott it and denounced it as a "despicable affront to every Christian." This, despite the fact that the Vatican newspaper had considered the movie reverential, and in no way obscene or sacrilegious.

As a result of the protests, the state made a review of the film and in February the Board of Regents revoked its license on the grounds that it was sacrilegious. Since then, three state courts, including New York State's highest court—the Court of Appeals—have upheld the ban.

• **Reversal**—The prospect now is that the U.S. Supreme Court will finally decide the issue. The film's distributor, Joseph Burstyn, and the American Civil Liberties Union, which is supporting his appeal, believe there is an excellent chance that the court will overrule the state decision. The main grounds would seem to be that the Regents had no power to revoke the license, once granted, and that the standard, sacrilegious, is too vague to apply.

However, there seems little chance that the court will rule on the over-all question of whether official movie censorship is legal. And it certainly will not touch the issue of private, indirect censorship.



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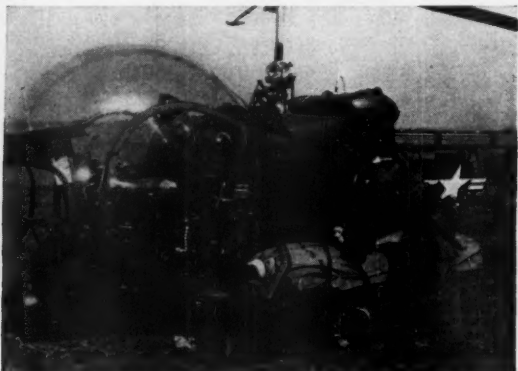
PEACE A knoll in the Secaucus (N. J.) marshes was a fine site for a billboard. But it was inaccessible. So . . .



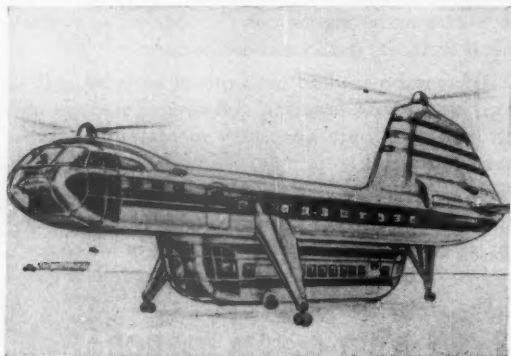
. . . this flying sandwich-man took to the air. The helicopter made 78 shuttle trips to the rock, carrying the sign piecemeal.



WAR It's tough to bring wounded soldiers out of the hills in Korea. They must go by stretcher to a rear area. Then . . .



. . . a helicopter takes over. Plastic-roofed litters are attached to the landing gear, and the wounded men are soon at a hospital.



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Civilian Trade

The young helicopter industry is all sewed up now with military orders. But what has the manufacturers excited is the commercial development they see coming after the armament rush. They are convinced that the rotary-wing craft that are now flying men and equipment for the armed forces will be the short-haul air transport of the future.

Military orders are now gobbling up most of helicopter production. In fiscal 1952 about 800 'copters will go into khaki at a cost of over \$200-million.

By contrast, commercial output is piddling. Defense Production Administration has set aside materials for two Sikorsky S-55s for Los Angeles Airways, 12 McDonnell Little Henry ramjet helicopters a month beginning next spring, and one or two Bell 47 crop-spraying helicopters a month. And that is all.

• **Proving Ground**—Companies don't look at the war interruption as a setback for commercial development. Quite the contrary. They have a hatful of experimental designs under way for the armed forces. Out of these, and out of the models already in field service, will come the transports of the not too distant future.

Company spokesmen point to the advances made in fixed-wing transportation as a result of World War II. Modern fleets of Douglas DC-6s, Boeing Stratocruisers, and Lockheed Constellations all stemmed from wartime military development.

In the same way, federal aviation experts expect helicopters in 10 years to dominate the short-haul field, up to, say, 200 mi. One informed analyst thinks about half the short-range feeder air transport of the future will be rotary-wing. Helicopters will surely find a place as air buses to and from city airports, and perhaps in luxury commuter service.

• **Passenger Service**—Within the next couple of weeks, Los Angeles Airways will take delivery on the first of its 8- to 10-passenger Sikorsky S-55s, with a second S-55 to follow. These will be the first multipassenger 'copters in civilian service.

Federal civil aviation agencies have adopted LAA as their chief guinea pig for experience in passenger hauling by helicopter. The Los Angeles airline has been operating a fleet of outmoded S-51 helicopters for three years, has totaled 1-million lb. of mail.

Passenger service is slated to start

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HELICOPTERS starts on p. 132

late next year, after lengthy shakedown operations. In the first phase, it will offer three round trips a day between International Airport, Los Angeles, and four nearby cities: Pasadena, Riverside, Santa Ana, and San Bernardino. Other cities will be added later, up to the 45 now served by LAA's mail route.

LAA hopes later to add service between the airport and downtown Los Angeles. But only multi-engined craft are allowed to fly over the downtown area, and LAA must wait for such equipment. The airline has proposed a twin-engine design to Sikorsky, the S-65. This helicopter would carry 16 to 24 passengers at 125 mph.

• **Compete with Cabs**—Helicopter passenger service has an especially good chance of success in the Los Angeles area. Superhighways and surface transit have never kept abreast of the growth and decentralization of the metropolitan zone.

Clarence Belinn, president of LAA, expects half the passengers would be traveling within the trade area served by his line; the other half would be making connections with other airlines. LAA figures it can afford to offer rates less than half, in some cases only one-third, of taxi fares between points on the initial route. It figures to 12¢-18¢ a mi. with a load factor of 50% to 75%.

Similar service is in the cards for the New York area. Two applications, both endorsed by the Port of New York Authority, have been hanging fire at the Civil Aeronautics Board for more than a year. CAB is believed to be holding up its choice between the two applicants largely because neither operator has a prayer of getting the helicopters he would need. The reason: Except for the two craft doled out to LAA, all Sikorsky helicopters of the type proposed for the service are going to the armed forces.

• **More to Come**—Military buying of helicopters will be bigger before it gets less. One clue to the growing importance of the craft in defense: At least three automobile manufacturers, who concentrate on large-scale defense production, are dickering with helicopter companies for licensing and subcontracting deals. They want to build both complete helicopters and assemblies.

These negotiations are still in an early stage. But they're a pointer to mass military orders beyond the helicopter industry's present capacity.

• **Preview**—To get an idea of the commercial helicopters of 10 years hence,

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you must know what's going through the mill now for the military. The warhorse of the three services is a military version of Sikorsky's S-55. This is the star performer in vertical-airlift operations in Korea.

The most sensational new helicopters are jet-powered:

- Rotor-Craft Corp. of Glendale, Calif., developed a 100-lb. "Pinwheel" you strap on your back (BW—Oct. 27 '51, p. 165). Two rocket motors at the tips of the blades spin the rotor like a Fourth of July pinwheel. The machine was developed for the Office of Naval Research. It hasn't flown yet.

- Stanley Hiller developed his Hornet, a small jet-powered 'copter, on the West Coast before the arms rush. He had hoped to market it to civilians for \$5,000; the price may be higher when it gets back in production.

- The McDonnell Little Henry ramjet machine has been adopted by the Air Force as its H-20. This is the model that goes into production next spring as a civilian item, chiefly for crop-spraying.

- At the other extreme of size is Howard Hughes' giant XH-17, designed as a flying crane to hoist tanks and field artillery over mountains and rivers. Hughes is working, too, on designs for a 70-passenger double-decker transport (picture, page 132), also jet-powered.

- Hopefuls—Other promising helicopters use piston engines. For example:

- Piasecki's twin-engine XH-16, built for the Army and now close to flight stage. This three-ton ship has two rotors mounted in tandem. Its cabin is planned for 44 passengers, comparable with a DC-4. One arrangement (picture, page 132) calls for a long-legged landing gear to straddle a detachable pod carrying additional payload.

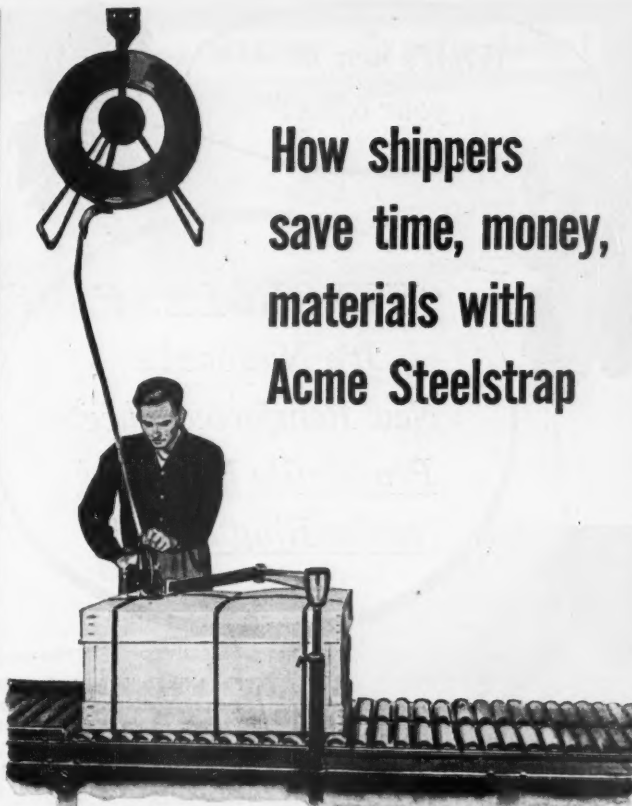
- Piasecki's H-21, developed as a rescue aircraft. Converted to commercial use, it could carry as many as 21 passengers in seats facing across an aisle. The Navy's HUP-1 Piasecki 'copter could also be converted to carry about six passengers.

- The new Sikorsky twin-engine helicopter suggested by Los Angeles Airways.

- A Bell antisubmarine helicopter described as capable of carrying 20 passengers in a civilian conversion.

- Pros and Cons—As things now stand, helicopters have two unique advantages: They can hover in midair, and they can operate from rooftops or parking lots. They also have two disadvantages: They're slow (around 100 mph.), and they cost a lot.

- Cost—Russell Gage, general manager of the helicopter division of McCulloch Motors Corp., thinks cost is the biggest drawback to the industry's growth. Mc-



How shippers save time, money, materials with Acme Steelstrap



"Lost time is never found again."

—Ben Franklin's Almanac, 1757

Whatever the product, the cost per unit shipped depends considerably on packing methods. That's why so many companies secure their products (and their profits) with Acme Steelstrap.

They save time and labor because Acme Strapping tools position the strap, pull it tight, seal it and cut it quickly and easily.

They save on shipping costs because Acme Steelstrap cuts weight and bulk, reduces storage space, cuts loading time, minimizes damage in transit.

For example, a window shade manufacturer (picture above), credits labor savings of 25 per cent and increased orders handled of 30 per cent to an improved materials handling setup based on using Acme Steelstrap.

We are looking forward to the day when we can supply Acme Steelstrap to everybody who wants it, in the quantities they want it. In the meantime, why not get all the information you can about it? Ask your Acme Steel representative for details, or write Dept. BW-111.

ACME STEEL COMPANY

2840 Archer Avenue, Chicago 8, Illinois

Steel Strapping — Stitching Machines and Wire —

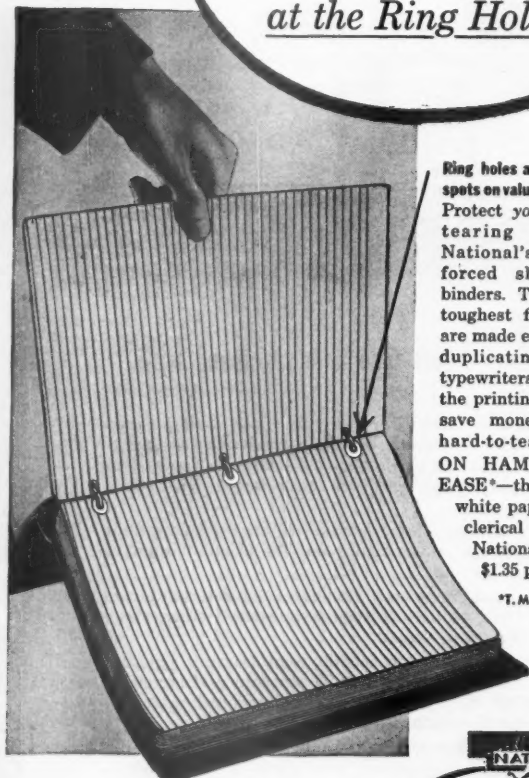
Venetian Blind Slat Stock — Corrugated Fasteners — Strip Steel



"What's new at
your office?"

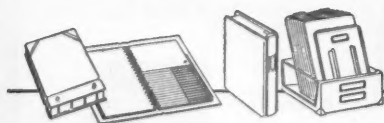


"STRONGLEAF"
It's National's
New Reinforced Sheet—
Practically Rip-Proof
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Ring holes are the most vulnerable spots on valuable notes and records. Protect your records against tearing and loss with National's Strongleaf reinforced sheets for 3-ring binders. They can take the toughest finger traffic! They are made especially for use on duplicating machines and typewriters. Easily handled on the printing press, too. You'll save money by using these hard-to-tear forms. **MADE ON HAMMERMILL EYE-EASE***—the eye-restful, green-white paper that minimizes clerical errors. See your National stationer. Only \$1.35 per 100 sheets.

*T. M. Reg. U. S. Pat. Off.



NATIONAL
BLANK BOOK COMPANY

Holyoke, Mass.
Dealers Everywhere

MAKERS OF STOCK ACCOUNTING FORMS AND EQUIPMENT — LOOSE LEAF, BOUND BOOK AND VISIBLE

**"... need a helicopter for
about twice the price of an
automobile ..."**

HELICOPTERS starts on p. 132

Culloch has a four- or five-passenger helicopter on the verge of getting its air-worthiness certificate. The company had hoped to produce this MC-4 in quantity for about \$15,000. Now they're thinking of \$25,000.

Gilbert Magill, president of Rotor-Craft Corp., believes helicopters will sell in quantity if the price can be brought down to about twice the cost of an automobile. Costs can best be cut by simplifying the design, he feels. His Heli-Jeep needs only one-fifth the parts used in most helicopters. He's betting on the rocket-propelled helicopter as the simplest, safest, and most economical to build.

• **Speed**—The industry is working on the speed angle, too. Interest is swinging lately to a crossbreed known as the convertiplane. This is an amalgam of the best features of the helicopter and of the fixed-wing plane.

The helicopter is handicapped in the speed derby by the fact that its major thrust of power is vertical. It moves forward only as a byproduct of the rotor's lift; when the rotor is tilted slightly forward, the 'copter moves ahead.

• **Two-Way Thrust**—To get around this limitation, convertiplane developers—Gyrodyne, Bell, Sikorsky, and McDonnell—are working along two lines. One is to equip a conventional helicopter with additional forward-aimed propellers. That's Gyrodyne's method, and the company has a prototype already in the air. The other idea is to mount stub wings on a helicopter and arrange the rotors so they pivot to a vertical plane, once the ship is in the air. Bell's working on this method.

Enthusiasts say the convertiplane can lick the fixed-wing airplane on its home ground. They foresee speeds of 350 mph., plenty for medium-haul transport, with more efficiency than the airplane. The conventional plane is saddled with more wing than it needs at cruising speed, just to take care of landings and takeoffs. The convertiplane gets the lift from its rotors only when it's needed. It can hover, or go up or down like an elevator, just as a helicopter can.

Whether the future brings a practical convertiplane or less radical refinements of the present helicopter, you can be sure there'll be many new uses for rotary-wing aircraft. That's what the U. S. helicopter manufacturers are banking on, to build their little 10-year-old business into a big-time transportation industry.

DAY or NIGHT - Exactly Alike!



"... our Distributors and their Dealers were quick to recognize the value of your new signs, both from the standpoint of identification and economy ... your Engineering and Research Departments are to be congratulated for developing these outstanding signs."

H. A. Kennedy

H. A. Kennedy
Advertising Manager
Bryant Heater Division
Affiliated Gas Equipment, Inc.
Cleveland 10, Ohio



Put Your National Advertising Right in Front of Your Dealer!

National advertising dollars buy more customers when you guide them to the point of sale. The smart merchandisers behind more than 400 of America's leading lines use Plastilux "500" signs to show customers where to buy. They know that dollars spent to build brand preference produce more when customers easily find the place to buy.

If you can't put every dealer's name and address in every national ad, you can put part of every national ad at the dealer's address!

Do a complete merchandising job with Plastilux "500", day-and-night identification. Your message and trade-mark, in full color, blaze forth: "Here is where to buy it." You win dealer loyalty and enthusiasm and make sales from the interest your national advertising develops. These signs are a minor cost in your advertising budget, a major factor in sales!

Write for complete information on what SIGNvertising will do for you and your dealers. Our SIGNvertising engineers are ready to serve you.

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Plastilux "500" SIGNS
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COSTS LESS to Buy, Ship, Maintain

Check these features and see why more of America's leading lines are identified by Plastilux "500" signs than by any other illuminated signs.

HIGHEST DAY AND NIGHT VISIBILITY —
No shadows at any time!

COSTS LESS THAN OTHER SIGNS —
Of comparable illuminated copy!

REPRODUCES COMPANY COLORS EXACTLY —
Trade-marks faithfully duplicated!

MINIMUM MAINTENANCE, EASY TO CLEAN —
Standard Lamps easy to replace!

SHIPS SAFELY AT REGULAR RATES —
No premium charges!

OPERATES ON LOW VOLTAGE —
No shorts and failures!

ENTIRE ELECTRICAL SYSTEM ENCLOSED —
Unaffected by cold, rain or sun!

SIGNS IN ANY SHAPE OR SIZE —
Limitless variety of designs!

LIGHTED BY STANDARD SLIMLINE LAMPS —
Costs only a few cents a day!

GUARANTEED!

All signs guaranteed a full year. Get details of our SIGNvertising service and how Plastilux signs pay for themselves!

REGIONS



FROM SHEEP RAISING, the Navajos' chief livelihood all but cut off by government restrictions, the Indians turned . . .



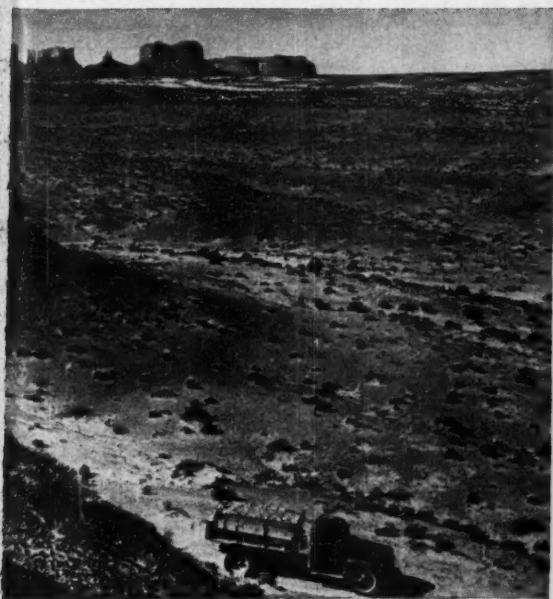
TO URANIUM A Navajo's truck filled with ore



BUILDING On this school project, Indians get pay, learn trades.

The Navajos

For many years the U.S. ran the affairs of the Navajo Indians the White Man's way. But in spite of close government management, the Navajos' plight only seemed to get worse. Now the White Man is taking a new tack. The U.S. Indian Service is turning the



starts long haul out from his claim in Monument Valley, Utah. Bad roads make the cross-reservation trek doubly hard.



PRIVATE BUSINESS Cato Sells (center) owns service garage, leases out trucks.



REFINERY WORK Oil gives Navajos work and puts money in tribal treasury.

Take Over White Man's Burden

Navajos' problems over to the Indians. And it's beginning to look as though that's what the bureau should have done long ago.

To a large extent the Service is letting the Indians run the Navajo-Hopi long-range rehabilitation program Congress

voted in April, 1950. And for the first time in 83 years of bureau management, such a program is working.

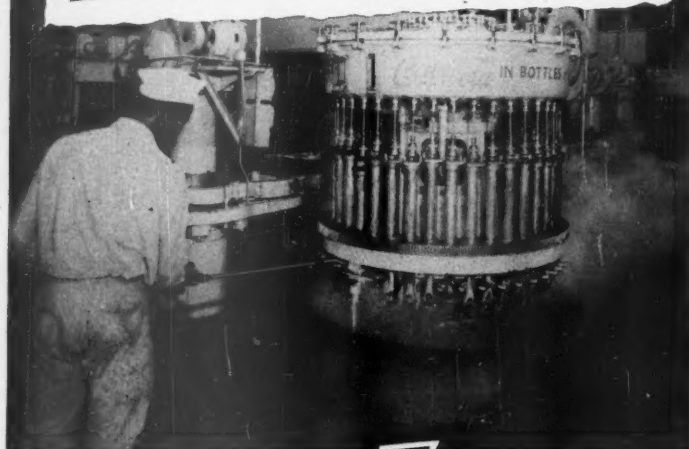
Just how bad things were with the Navajos came to light late in the 1940's. Widespread publicity claimed that the Navajos were worse off than any other

tribe. The Dept. of Interior promptly made a survey and decided that the tribe needed help. Interior got Congress to authorize the 10-year program and to appropriate some \$88-billion to carry it out.

This is the second year of the pro-

**CLEAN AS A PIN...
AND STERILIZED, TOO**

*Ten Times Faster
than by Hand-Cleaning Methods*



**HYPRESSURE
STEAM**

**Jenny
CLEANER**

**SAVES TIME and EXPENSE
IN ANY INDUSTRY**

No matter how special your cleaning requirements are, Hypressure Jenny steam cleaning provides the fastest, most effective method known for removing dirt, grime, grease, oil, product accumulations, paint, or other substances from your production machinery, floors, walls and equipment. Besides cleaning right down to the bare surface, Jenny sterilizes and deodorizes as it cleans!

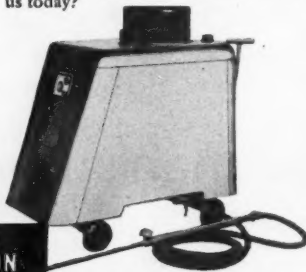
You can reduce cleaning time and labor expense 90%, because one man with Jenny can do more cleaning in an hour than 10 men can accomplish in the same time by bucket-brush-and-solvent methods.

In factories, shops, mills, mines, garages, food processing plants, and in many other industries, Jenny is saving up to 40% in man-hours and

labor costs by cleaning equipment before repairs thus eliminating the non-productive time mechanics must spend fighting oil and grease.

You gain extra productive hours, without added manpower, with Jenny on the job!

We'd like to send you the full story, without obligation. Why not write us today?



HYPRESSURE JENNY DIVISION

HOMESTEAD VALVE MANUFACTURING COMPANY

P. O. BOX 88 "Serving Since 1892" CORAOPOLIS, PA.

Distributors in all parts of the world.
For local representative see
Classified Telephone Directory.

gram, and the appropriation actually available for expenditure this year is a little over \$6-million.

Under the program Congress earmarks the money for certain projects; the Navajos take over from there. This is how the total appropriation breaks down: soil and water conservation, \$10-million; irrigation and water supply, \$12,067,000; roads, \$20-million; schools, \$25-million; relocation projects, \$6,550,000; development of industries and enterprises on the reservation and off-reservation work opportunities, \$44-million; and smaller items such as surveys of natural resources, communication, housing, and service systems.

The Navajos' troubles all started way back in 1868. That was the year the U.S. herded them into their semibarren reservation. Now, 70,000 strong and the largest U.S. Indian tribe, they share with the small Hopi tribe 16-million acres that sprawl over part of Arizona, New Mexico, and the Colorado plateau region.

• **Stock or Starve**—In the beginning the government gave each family two sheep and a goat. The idea was that they would make a go of stock raising.

By 1930 the inevitable happened. Overgrazing had stripped the already sparse ranges. The Dept. of Interior had to do something, so it started a drastic stock reduction program.

To get the Indians to go along, the government promised them more land, irrigation, stock improvement, and wage work. Only it didn't appropriate enough money to carry out all these promises. So when the stock reduction program took hold, resulting malnutrition opened the gates to widespread tuberculosis and other diseases.

• **Looks Good**—With their chief livelihood knocked out from under them, the Navajos had to scrounge around for other kinds of work. That's why the long-range rehabilitation program looks pretty good to them today, even though it has limitations.

One of them is that only \$9-million, one-tenth of the total amount, was earmarked for the first fiscal year, which ended July 1, 1951. This was not nearly enough. But the Indians made the most of what they got and filled in the gaps with tribal funds of their own. The Navajos have built up a tribal treasury of \$5,711,000 from oil and gas leases and royalties, mining revenues, a 4% license tax on the gross sales of 100 white traders on the reservation, and surplus earnings of a tribal sawmill.

• **Powwow**—The tribal council holds the purse strings of the treasury. The council is part of the Navajos' new democratic setup. Its 72 elected members represent all districts of the reservation, and it functions much the same as a state legislature. Actually, the council can only make recommenda-

MAGNESIUM

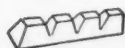
and the SALEABILITY



Competition is a great American institution to the consumer—but at times it plays havoc with your sales department. The simple solution, of course, is "build a better mousetrap." And it may be just that simple when you use magnesium. The many inherent advantages of this ultra-light metal become sales advantages for you. In many cases great savings in weight through increased use of magnesium has made possible numerous design improvements and the addition of extra sales features. Also, consider the psychological effect a lightweight product has over a heavier one—even when the weight is of no functional

importance! With but a few obvious exceptions, anything that has to be moved or lifted will gain consumer acceptance quicker, if it's lighter. Many of the country's more progressive manufacturers have already found that magnesium permits better design, better performance . . . hence, a more saleable product.

So if you are making, or contemplate making anything in which light weight is important—or if you are just bent on beating competition—plan with magnesium. It has already made many products better, more versatile, easier to handle, more profitable to sell . . . it may improve yours.



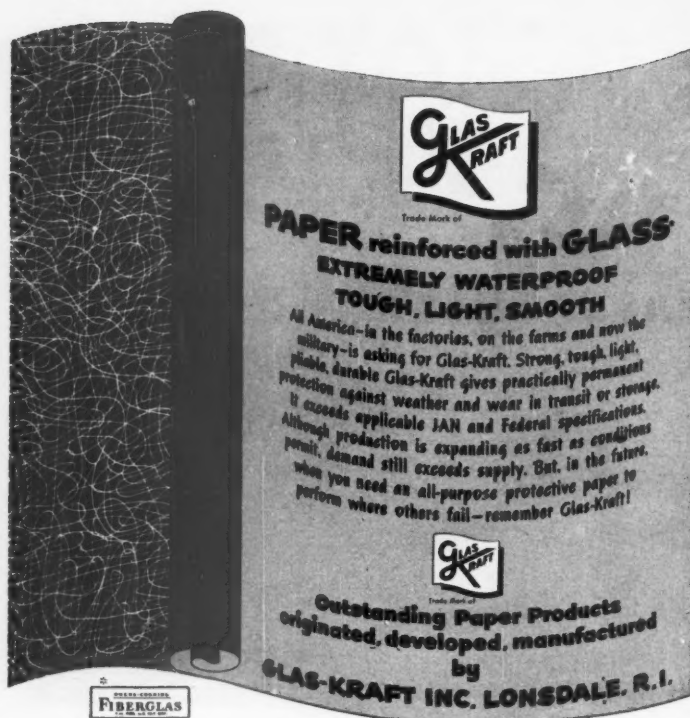
This Little "Pig" Was Drafted . . .

Today, magnesium like many other metals, is a tremendously important part of our defense effort, particularly where light weight is a specification in design. As a result, the supply for commercial uses is often limited. But "tomorrow," magnesium promises new horizons in the field of metal supply. The seas, at our own shores, can provide 100 million tons per year for a million years without significantly reducing the supply!

THE DOW CHEMICAL COMPANY Magnesium Department • Midland, Michigan

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San Francisco • Los Angeles • Seattle • Dow Chemical of Canada, Limited, Toronto, Canada





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Trade Mark of

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EXTREMELY WATERPROOF
TOUGH, LIGHT, SMOOTH

All America—in the factories, on the farms and now the military—is asking for Glas-Kraft. Strong, tough, light, pliable, durable Glas-Kraft gives practically permanent protection against weather and wear in transit or storage. It exceeds applicable JAN and Federal specifications. Although production is expanding as fast as conditions permit, demand still exceeds supply. But, in the future, when you need an all-purpose protective paper to perform where others fail—remember Glas-Kraft!

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FIBERGLAS
PAPER

UNBRAKO THROUGH THE AGES—No. 5



LEONARDO DA VINCI'S FRENETIC ACTIVITIES BETWEEN SITTINGS FREQUENTLY MOVE HIS MODEL, ONE 'MONA LISA' TO MILD MIRTH.



**Self-Locking
Socket
Set Screw
(with Knurled
Cup Point)**

UNBRAKO

**SOCKET
SCREWS**

SPS STANDARD PRESSED STEEL CO.
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"Half a century of PRECISION FASTENERS"

tions. But these are likely to get a quick O.K. from Indian Service superintendent Allan G. Harper.

The council also throws its weight around in deciding how the long-range money will be spent.

• **Oiling the Wheels**—One of the first things the tribe did with the money was put fire under the industry and enterprise phase of the program. The government set up only \$52,000 for industrial development the first fiscal year. So the council dipped into the treasury for \$379,000 more and took eight tribal enterprises under its wing.

The first was the sawmill, which had been operating under government management at a loss since 1930. The Indians took it over in 1947 and hired an experienced sawmill manager to take charge. In four years the mill piled up \$1-million of cash reserves out of earnings. This year the tribe invested \$143,000 in improvements, including planing equipment and a box factory.

• **In Business**—Individual enterprise on the reservation is going ahead full steam. Navajos hold six coal-mining permits, operate 29 stores and trading posts. A number of Indians do contract hauling on and off the reservation. Several are contractors. And many work as carpenters or garage mechanics.

• **Hidden Wealth**—The crowning development, though, is recognition at long last of the rich mineral deposits on the reservation. There are exciting possibilities in oil, gas, uranium, gold, manganese, and helium.

Much of the reservation lies in the Colorado plateau, now believed to contain enough uranium to make it self-sufficient for all foreseeable needs.

• **White Man's Way**—All this makes the Navajo's future seem pretty rosy. But he still has troubles. What bothers the council most is the slow way the long-range program proposes to solve the tribe's two greatest problems—schools and roads. It would like to spend a big hunk of the 10-year appropriation for roads—as much as \$20-million. Likewise for schools: The 10-year plan provides \$25-million.

• **Big Business**—In spite of these problems, though, there's no getting away from the fact that the Navajo tribe has gone into business in a big way. Last July the council allotted nearly \$2-million to tribal enterprises. Its income last year from mining, oil, and gas leases and royalties, and permits was \$565,357. It loaned \$374,000 of this to individual Navajos and Navajo enterprises.

And there's a new spirit on the reservation as people begin to realize that the Navajos have valuable talents to contribute to the American economy. If the Navajos only double their present tax-exempt per capita income of \$285 annually, they'll be a market worth cultivating.

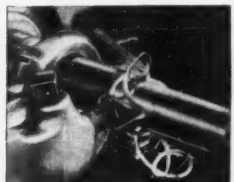


OBTAINED: information that helps you find hidden plant capacity!



Ordinary lighter flints held the secret

For years industry had sought a way to broaden the use and capacity to produce many strategic corrosion and high heat resistant steels, by improving their hot workability. Carpenter A-E-Service hit the secret... applied Cerium, a rare-earth element heretofore used chiefly in ordinary cigarette lighter flints.



Making a "nickel" work easier

"Working" or machining 36% nickel alloy parts used to be a pain in the neck to industry. Then A-E-Service went to work for Carpenter customers. Result: Free-Cut Invar[®] 36" was invented. Now 36% nickel alloy parts are machined faster, easier, and many new uses are now possible.

There's a reason why many plants are finding hidden plant capacity to meet higher production quotas these days. They're getting *more* from present machinery and manpower, because of Carpenter's Application Engineering Service.

A-E-Service is Carpenter's way of working with customers to get maximum returns from every job involving specialty steels. That's why it's a revelation to watch the Carpenter man at work. He digs for every bit of data he can get. He analyzes the job, notes previous performance records, asks a lot of questions. Result: He's equipped to intelligently recommend the

one steel best fitted for top performance.

And A-E-Service is more. It involves in-the-shop counsel by field engineers to spotlight opportunities for more output. When necessary, it puts a pioneering staff of laboratory technicians on the job. In answer to customers' needs, this is the same staff that invented the first free-machining stainless, the first low temperature air-hardening die steel, the first chrome-nickel alloy steel of its kind in the world.

This is Carpenter A-E-Service... an entirely different concept of service on specialty steels. You can count on it now and in the days ahead.



**keeps you
ahead of competition**

THE CARPENTER STEEL COMPANY • READING, PA.
Pioneers in improved Tool, Alloy and Stainless Steels through continuing research



EXCHANGING CARDS are Chamber of Commerce men Arnold Klaus and James D. Goforth.



LESTER C. REUKEMA (center), professor at the University of California, spoke on industrial uses of atomic energy.

The Fraternity of Western States Airs Its

Ever since the pioneer days, the Far West has considered itself a distinct region. And usually, it has been a little on the outs with the rest of the country. Whatever differences the western states have among themselves, they usually present a united front when they are dealing with the East. And this is likely to be particularly true when business and economic issues are involved.

Last week one of the organizations that plays a major part in keeping up this united front held its annual meeting in San Francisco. It is the Western States Council, a federation of the chambers of commerce of 11 states and their principal cities. The problems that the council discussed and its approach to them were typically western.

• **Distance**—Some of the reasons for the strong regional feeling are easy to understand. The 11 states have a lot of problems in common, most of which come under the general heading of "distance." The pioneers were so far from the East that they almost forgot it existed. And not even radios, phones, transcontinental planes and railroads have entirely cut down the barrier. Fine print in the ads still reads "Slightly higher west of the Rockies."

Westerners resent it bitterly when they have to shell out a stinging premium on new cars, because of extra freight costs. And western manufacturers pay more for steel than their eastern competitors. (Hence the typi-

cally western passion for a steel industry of its own.)

It works the other way around, too: Western products selling in the East have a handicap even before they start—freight costs again. Canned foods from the West, for example, have to include a high shipping cost in their retail prices. This extra cost, of course, isn't there to bother the eastern canneries, and the result is tough competition for the West.

It's a widely held opinion in these states that the East is running a deliberate campaign to block their efforts and hold on to its historical advantage. In the matter of freight rates, for example, the western states have an idea that eastern influence has blocked their efforts to cut down the differentials. Repeated hearings on the subject have failed to dispel this suspicion. And it's this beat-the-East feeling, as much as anything else, that is holding the brotherhood together.

• **The Region**—Aside from that, the very nature of the region acts to bind this chummy group of states still firmer. The climate makes it an all-year vacation spot, and a substantial amount of the West's business revolves around the travel and resort trade.

With this much to work on, organizations like the Western States Council find that their members think and act along definite regional lines.

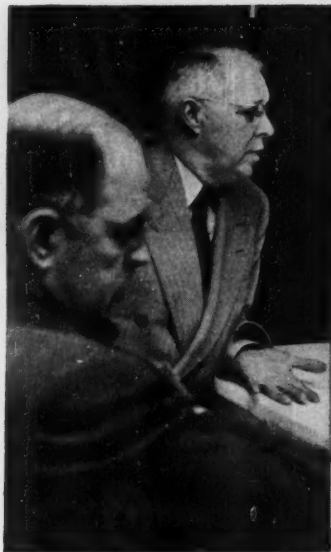
• **Powwow**—Host at this year's meeting, held Nov. 12 and 13, was the San

Francisco Chamber of Commerce. A glance at the agenda shows that the atmosphere of the powwow was not one of jovial patting-on-the-back. Most of the speakers had something to gripe about.

The principal speaker at the first session was George C. Tenney, western vice-president of McGraw-Hill Publishing Co. He jolted at least some of the members by telling them that the West is no longer a leader in the industrial expansion parade—as it was in the decade 1939-1949. The west south central states, he said, are building new industry about twice as fast as the Pacific Coast.

• **Vacation Money**—The next nudge came from Don Thomas, general manager of the All Year Club of Southern California. He cited a survey showing that \$7-billion has been spent every year on vacation travel, and that 18% of that travel headed west. According to this, the West should have got \$1.3-billion—but Thomas doubted that it got anything close to that. Obviously, though 18% of the people were coming to the West, 18% of the money wasn't. The need, Thomas said, was for more energetic advertising and promotion.

To demonstrate the huge amounts that other areas and other countries spend in travel advertising, Thomas brought along an exhibit of the travel advertising content of Holiday magazine for a single year. It was 80 feet



C. W. THORNBERRY (foreground) led discussion on private vs. public power.



DON FOLLET, of Seattle chamber, dreams of his city's conversion to public power.

Grievances

long, stretched completely around the room.

Thomas argued that travel promotion is one of the best ways of stemming the constant flow of dollars from the West to the East. The flow won't ever be reversed, he admitted; dollars head east for federal taxes, for eastern dividends on western investments, for raw materials and manufactured products that aren't available in the West. "But we can whip up the counterflow. . . . We must make the most of every resource, exploit it to the maximum."

The federal government also got its share of criticism. Gus Backman, of the Salt Lake City Chamber of Commerce, said that the Forest Service and the Bureau of Land Management were the only two federal agencies that had done anything for the West. Marshall Swearingen, president of the Oregon Farm Bureau Federation, thought the Dept. of Agriculture's Brannan Plan was "a lot of political hogwash." "Old bureaucrats never die," he said, "they just smell that way."

Samuel H. Williston, president of the Cordero Mining Co. (mercury), took up the cry by charging that the government has not done enough to help industry step up production of nonferrous metals—copper, lead, manganese, tungsten—which are essential in any defense buildup. The West is a large-scale producer of these metals, and yet, Williston said, we're importing 90% of our manganese instead of turn-

ing it out ourselves. "If Stalin had been sitting in Washington," he said, "... he could hardly have engineered a plan that would have robbed us of raw materials on which we must base any war effort any more effectively than the Washington planners."

• **Tidelands**—The Dept. of Justice took a raking over the coals from Robert Irvin of the Long Beach Harbor Commission for its tidelands oil suit that deprived the states of title to offshore oil. Although the federal government won its case, the states still haven't given up hope; royalties from tidelands oil are being held in escrow in Washington until there is some final settlement.

The tidelands issue is an example of how the Western States Council helps solidify opinion of the member states. Ordinarily, the inland areas—Idaho, for example—would feel that there was nothing in it for them one way or the other. But when the subject came up, the delegates from the interior paid attention to it and by implication threw their weight behind Long Beach. In return, they expected Long Beach to worry with them about such problems as metal mining and phosphate production in Idaho.

• **No Bloc**—The general tone of thought among the western states seemed to be that they did not want to form a bloc—just a fraternity. Their prime hope is not for self-sufficiency as an end in itself—although they concede that this would be nice—but rather for what they consider economic equality with the East.



TRAVEL ADS from single year of Holiday magazine stretched out for 80 feet.



STOP MURDERING TIME!

You just can't get away with it! All the time killed by inefficient record-keeping systems cuts down your profits!

Save time, work and money. Write today for complete data regarding a *VISI* record system designed specifically for you!

IN
DAILY
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Chrysler Corp.
York Corporation
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Royal Typewriter Co.
Ford Motor Company
Coca-Cola Bottling Co.
Monsanto Chemical Co.
International Harvester
Pan-American Airways
Walt Disney Productions
National Bank of Detroit
Du Pont de Nemours & Co.
Westinghouse Electric Corp.
Pepperell Manufacturing Co.
Twentieth Century-Fox Film Corp.
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City Tax Drift

Nonproperty levies have been bearing larger share of the municipal load in the past 10 years.

In the past 10 years, financially hard-pressed cities have been turning more and more to nonproperty taxes. The trend shows up plainly in a study published recently by the Municipal Finance Officers Assn.

In 1949, the last year for which figures can be obtained, property taxes accounted for only 53.4% of the total revenues of cities of over 10,000 population. In 1942 the rate had been 64.9%. The study attributes the trend to rising municipal costs, legal tax rate limitations, and the feeling that real estate was carrying too big a share of the cost of municipal government.

• **Chief Types**—The MFOA analyzed nine major types of nonproperty taxes: motor fuel, sales, income, cigarette and tobacco, admission, liquor, motor vehicle license, business licensing on gross receipts, and public utility taxes. As of mid-1951 one or more of these taxes were being used in 504 U.S. cities—46% of the over-10,000 population class. These cities had a total of 1,037 nonproperty taxes in effect; 319 of them had been imposed in the past five years.

Cities using the major nonproperty levies obtained less than half of their total all-source revenue from property taxes. Cities that did not use them got more than 60% of their revenue from property levies.

Nonproperty taxes were used more frequently in the two classes of larger cities than in the smaller ones. Of the cities with over 500,000 population, 83.33% used some nonproperty taxes; in the 250,000-500,000 group, the figure was 90.48%. But down in the 25,000-50,000 population group, only half the cities adopted any nonproperty taxes. Only 56 of these cities had more than one of them. No city used all nine taxes. One—Washington, D. C.—imposed eight of the nine.

• **Utilities**—By far the most popular is the public utility tax based or measured on gross receipts; 274 cities used it. Next in popularity are gross-receipts business taxes, used by 196 cities, and admission taxes, used by 192. Municipal motor vehicles taxes, sales taxes, cigarette and tobacco taxes, motor fuel taxes, city liquor taxes—on the commodity itself rather than flat license fees for liquor sellers—and income taxes follow in that order.

Income taxes led in terms of per capita yield. (Main reason that they're

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used by the fewest cities is the lack of legal authority to impose them.) The average per capita yield in 24 cities last year was \$12.93. Top yield (\$19.93) came from the 1% tax in Toledo, Ohio. Lowest yield (\$2.22) was in State College, Pa., though the rate was again 1%.

• **Going Up**—The MFOA report concludes that, in general, the yield from income taxes of a given percentage increases with the size of the city.

Sales taxes come second in per capita yield. Last year 92 cities of over 10,000 imposed them; they brought in an average of \$11.71.

The gross receipts tax ranked third, brought in an average per capita yield of \$5.08 in the 196 cities that are now using it.

On the basis of per capita yield, other nonproperty taxes lined up in this order:

Motor fuel—\$3.76 on the basis of the average tax rate of .0198 per gal.

Cigarettes—\$2.99 on the basis of an average rate of .024 per pack.

Liquor—\$2.37 in the 35 cities that impose a tax on the commodity itself.

Public utilities, the most common nonproperty tax—\$1.86 in the 274 cities using it.

Motor vehicle—\$1.71.

Admission taxes—\$0.93.

Hawaii Prunes Taxes To Lure Army Buying

Hawaii has worked up a cute gimmick to stimulate trade with its biggest single customer prospect—the armed forces. It's a tax exemption: The territory's legislature has exempted all sales to the military services from territorial excise and liquor taxes. The idea is to divert to the islands some of the big purchases usually made in California.

The exemption runs out next July 1. But the governor may continue it for another year, if he finds it hasn't hurt the territory's financial standing. Far from hurting, most Hawaii businessmen expect it to put enough extra money into circulation to more than make up the tax loss.

• **Liquor**—Big lobbyists for the bill were liquor dealers who saw hundreds of thousands of dollars worth of business elude them when the Navy started to buy through a Treasure Island cooperative in San Francisco.

Behind the scenes it is said that the services, in exchange for the tax exemption, will try to have the territorial 2% compensation-dividends tax withheld from federal paychecks in the territory. The U. S. Supreme Court has held that federal workers in the territory are liable for the tax. But collecting it has been expensive and difficult.

Centralab* printed electronic circuits

TV now reaches more homes than ever before, thanks to engineering achievements such as the printed electronic circuit. Exclusive development of Centralab engineers, and now in use by most TV set manufacturers, this tiny unit effects production economies out of all proportion to its size. Hardly bigger than a postage stamp, in one type of assembly it replaces 8 conventional capacitors and resistors . . . reduces soldering operations from 16 to 3! Similar savings are obtainable over a wide range of installations to which the printed electronic circuit is adaptable.

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MARKETING



PLACE SETTING, admired here by Gorham's vice-president, Burrill M. Getman, is getting sales emphasis from sterling manufacturers, to convince public that . . .



EVERYONE CAN AFFORD sterling flatware. Almost everyone in Canton, Ohio,

Sterling Flatware Shifts From Classes

There was a time when a set of sterling silver flatware pretty much marked its owners as people of substance—or at least implied that their grandparents had been.

Nowadays about all that it proves is that you can afford to shell out 33¢ a week to keep the time payments going.

Sterling silver, in short, no longer belongs exclusively to the carriage trade. It has been democratized along with furs, diamonds, and Paris styles. And it has all happened within the past decade.

• **Close-Mouthed**—There aren't any sales figures available, because the sterling silver industry is an old-line, close-mouthed one. There are some guesses, however, and they show a staggering increase. The trade figures, for example, that between 1941 and 1951 more sterling flatware was sold in the U. S. than had been sold in all the years before then. Some of these gains may have been made at the expense of sterling's less-expensive rival, plated silverware.

The Gorham Mfg. Co., one of the oldest and probably the largest of the sterling silversmiths, uses another yardstick. Burrill M. Getman, Gorham's vice-president in charge of sales, estimates that during the years 1948 through 1950 annual sales of sterling flatware were six times what they had averaged in 1939 and 1940. Retail sales in general went up only about three times during the same period. Inflation of prices was not a major factor, since sterling prices only rose 28%.

Another way you can judge the boom in sterling is from Gorham's profits (the company doesn't release sales figures). In every year since 1947, Gorham's net income has been \$2.5-million or better. That's more than double the 1929-30 average.

• **What's Behind It**—How did all this come about?

The basic factor, of course, is the same one that made W. & J. Sloane try to broaden its market for furniture

(BW—Oct. 20 '51, p137) and that caused Federated Stores Corp. to create its new medium-priced Fedway chain (BW—Nov. 3 '51, p122). It's the prosperity of the past 10 years, which has broadened the middle-income groups and upped the country's standard of living.

It was the war that touched off sterling silver's own boom. "Rosie the Riveter always wanted sterling and suddenly found she had the dough to buy it with for the first time," says Gorham's advertising manager Edward Manning. What's more, she could almost always lay her hands on some sterling flatware, whereas a lot of things that might have vied for her money were unobtainable. Even less-expensive plated silverware disappeared from the market—just as it's beginning to again—because it required copper and tin.

• **Opened New Doors**—The simple fact that sterling was available moved it into the big time. The Aluminum



came to look anyway. A crowd of 30,000 showed up at mass demonstration of table settings sponsored by Deuble's of Canton.

to Masses

Cooking Utensil Co. (Wear-Ever) took on sterling flatware as a door-to-door item when aluminum pots disappeared (BW-Sep.20'41,p31). This, says Getman, was one of the really significant things that have happened to sterling silver over the past decade. Wear-Ever's door-to-door salesmen carried the gospel of sterling flatware into homes that had never considered sterling before.

What made Rosie the Riveter, the war bride, and everyone else want sterling silver so badly is a good question.

Gorham likes to emphasize that sterling has an intrinsic value.

• **Gentry**—But Gorham people also admit that there is a strong emotional factor connected with the purchase of sterling. Sterling silver has strong overtones of social prestige, which go far back in the consciousness of Western man. It's a significant point that the South, according to Gorham, buys far more silver than its share of the na-

tional income would warrant. More than one southern home has more money invested in silver than in all other furnishings put together. As Getman points out, the South is more tradition-bound than the rest of the country, closer to Old World traditions.

Getman puts it this way: "Sterling is a mark of gentry."

• **New Approaches**—Whatever reason people may have for wanting sterling, their collective decision to have it all at once has had an electric effect on a conservative old company like Gorham.

Getman and his fellows at Gorham are silversmiths at heart, steeped in a generations-old tradition of craftsmanship. Sterling flatware production still requires a considerable amount of craftsmanship. But Gorham has suddenly had to start thinking in terms of masses rather than classes. This has meant new merchandising policies, new channels of distribution, new advertising themes, even new approaches to design and production.

• **Door-Knocking**—Door-to-door selling, for example, came to stay. It is now a major means of marketing sterling. At

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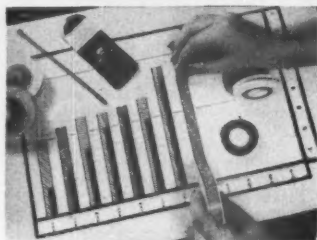
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this time at least four big companies are in the field. Two of them were formed by men who learned what you could do with sterling at Wear-Ever. Gorham has a subsidiary—Alvin Corp.—to handle this distribution through jobbers.

The war had still other important effects on sterling. One very important development was the emergence of the place setting as the basic sales unit. Formerly, sterling had been sold by the dozens, which made it hard for salesmen to answer the question, "How much will it cost?" The place setting gave them a definite unit to talk about and one small enough not to scare away the man with only a few dollars in his pocket.

• **Flexibility**—New selling methods for a new market have put a strong emphasis on flexibility at the retail level. "The dealer's success today," says Getman, "depends on his ability to adapt himself."

A lot of the old-line jewelers are not happy about this. They resent the fact that the door-to-door salesmen and others are poaching on their preserves. But, as the Gorham people point out, "We had to broaden the base of our operations."

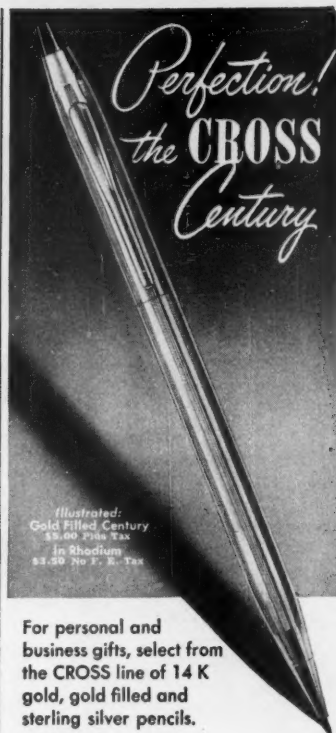
Dealers who have been willing to adapt the new techniques have made out well. That means that many of them have had to take over the policies offered by credit dealers. They have had to offer "club" plans. They have had to use the kind of merchandising that attracts crowds (picture, page 149).

• **Mass Appeal**—Because the base has been broadened, new factors have risen in the trade. Mail order has become a major means for selling sterling. And the department store is also making big strides, where formerly it was a relatively negligible factor in sterling sales.

New markets have also meant new advertising policies. Before the war Gorham's mainstay for advertising was the class magazines—House Beautiful, Vogue, Harper's Bazaar. But the mass market has made Gorham switch its emphasis to such magazines as Mademoiselle, Seventeen, and similar publications.

Gorham is not the only silversmith doing much more advertising than it did before the war. The mass effect of about \$4-million a year in advertising has been a factor in selling the idea of sterling to the country.

• **Streamlining**—The war also nudged the sterling industry into streamlining itself after the manner of other mass production industries. After all, even though silver was obtainable during the war, it wasn't plentiful. To save on metal as well as on labor, Gorham cut back the designs it made and the number of items. Before the war it had 33 designs on its active list; each design had anywhere from 50 to 70-odd differ-



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ent pieces. During the war Gorham cut its designs to a dozen, trimmed the pieces down to just the essential ones.

It has never gone back to prewar expansiveness. Today Gorham has 17 designs on its active list; there are from 35 to 45 types of pieces in each. This cutback in the number of pieces fits in with today's more informal living and entertaining. Those who have a set of sterling that is among the 220-odd Gorham designs on the inactive list, or those who want some odd piece, can still get what they wish, however. Once a year Gorham sets aside a few weeks to do nothing but make up special orders.

• **Not Forgotten**—Gorham's concentration on fewer designs and pieces the rest of the year has paid off handsomely. This has made savings on the manufacturing level, helped keep the price of sterling down. And this in turn has helped to broaden the market.

But Gorham has not forgotten the custom buyer entirely. There are still skilled craftsmen at Gorham's Providence (R. I.) plant who specialize in fine hollowware—pitchers, trays, cups, and other hand work. If you want to be really exclusive, you can still buy a five-piece sterling tea set for \$1,300.



Automatic Snack Vendor

A coin-operated snack bar was the latest thing at the National Automatic Merchandising Assn. show in Cleveland. It's a Wittenborg, made in Denmark; U.S. distributor is Oregona Importing Co., Portland, Ore. The customer puts in his coin, opens the window, and helps himself to sandwiches, pastries, salads, fruits. A rotary tray, divided into two to eight compartments, turns automatically to leave a full compartment for the next hungry man. Oregona has set up 10 of the portable machines in factories, filling stations, terminals.

Some Needling . . .

. . . from stockholders enlivened Macy's annual meeting. But most of them were calm about drop in earnings.

The officers and directors of R. H. Macy & Co. came in for some needling at the annual stockholders meeting last week. Stockholders wanted to know why earnings had dropped—from \$3.35 per share of common stock in fiscal 1950 to \$2.51 for the year ended July 28, 1951 (BW—Oct. 27 '51, p. 150). There were no fireworks, though, and the meeting turned up some interesting sidelights on the big store's operations.

Earnings: "I do notice that they have dropped," one woman said. Another stockholder was more belligerent. He read from Moody's Stock Survey of Oct. 22, 1951, that "Macy's over-all performance has fallen far short of that of other leading department stores."

President Jack Straus admitted that it wasn't a good showing. "We are taking steps to improve our position," he said. As to what the steps were, the stockholders showed no curiosity.

Branch stores: Besides the usual reasons—taxes, rising costs—for the unsatisfactory showing, a factor in the earnings picture has been the company's branch store expansion. Until the branches build up to capacity volume, they are a drag on earnings. All are in the clear now except the newest branch, in Kansas City; it is just moving past the breakeven point.

Asked pointblank whether that meant Macy-New York was doing its share, Straus replied he didn't think he could say it was.

Fair trade: Richard Weil, Jr., head of Macy-New York, said his store had signed a small number of fair trade agreements despite its continuing 6% cash policy. It had to in order to carry some items the store wanted. At the time the Supreme Court broke the non-signer clause, fair-traded goods represented well under 10% of Macy's total sales. The percentage is still lower now, he said.

Sunbeam suit: On the \$6-million antitrust suit brought by the appliance manufacturer (BW—Nov. 10 '51, p. 137), Straus commented that Sunbeam had lost its plea for an injunction in a Philadelphia case, "which contains many of the claims now made against Macy's."

Omission: Other questions ranged from "Why did you raise executives' salaries?" to "How can I get my drapes back?" But no one challenged Macy's policy on what Straus has described as an expensive price war.

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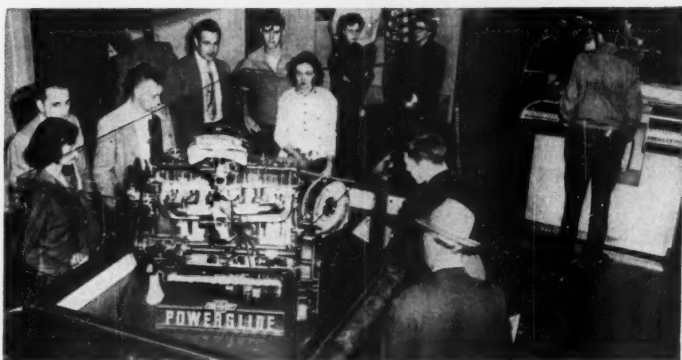
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Giant Trucks Bring Auto Show...



... To Chevy Dealers' Showrooms

Chevrolet dealers are staging auto shows right in their own display rooms this fall. Huge truck-trailers haul the Chevrolet Feature Shows around for one-week stands at the dealerships from coast to coast.

The eight trucks are loaded down with six impressive-looking gadgets—features of a Chevy truck or auto innards. Thus, an animated Powerglide transmission splits in two to show how it's put together. A cutaway of a passenger car body shows the inside details of body construction. The spectator

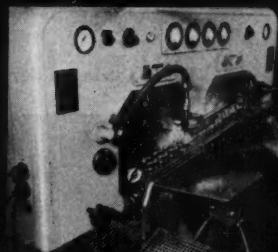
himself can operate a model of the twin-action truck brake or the four-speed Synchro-Mesh truck transmission.

The dealers pay \$50 a day to help meet the expenses of the trained personnel that travel with the shows. But that's just a drop in the bucket against the \$1-million Chevrolet paid out for the exhibits.

Chevrolet has a still larger display on tap if dealers want it. This one travels in two trailers; it includes a complete passenger car chassis, overturned to show how it works.

~~Copper-plating
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Eliminated



This 20 KW, 450,000 cycle TOCCOtron tube oscillator unit handles 600 transmission nuts per hour.



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THE JOB—International Harvester Company, world-famous builder of farm machinery, uses TOCCO for the selective hardening of the special tractor transmission nut shown above. Only the contact surfaces are hardened. The bottom channel must remain soft or the part will crack, and any distortion would affect the threads. Material is C-1045 steel; production required 600 per hour.

THE RESULTS—Formerly the part was copper-plated before milling the slot. Then the slot was milled, the part carburized and hardened in a batch-type furnace. Finally the parts had to be cleaned and the threads re-chased after hardening to assure proper fit. Now the adoption of TOCCO hardening eliminates these operations, stops distortion and saves \$3.50 for every batch of 600 pieces.

● This job, typical of thousands of cost-saving TOCCO installations all over the world, may suggest ways you can reduce costs and speed production on hardening, brazing, annealing, forging or melting jobs in your own plant. Experienced TOCCO engineers are glad to work with you—without obligation, of course—for similar cost-cutting results.



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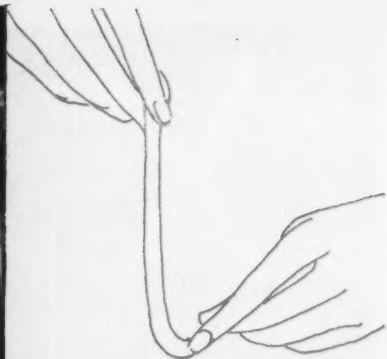
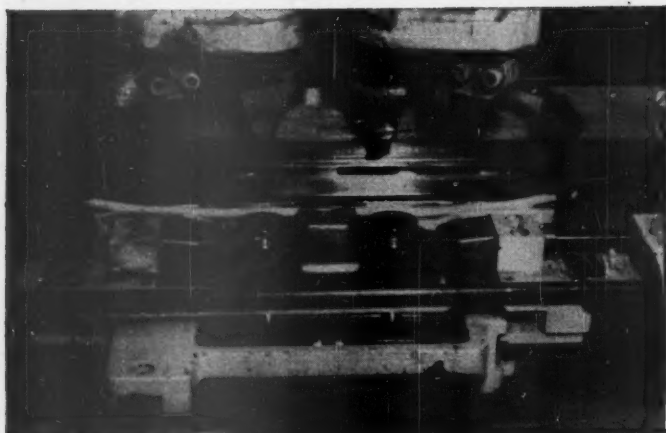
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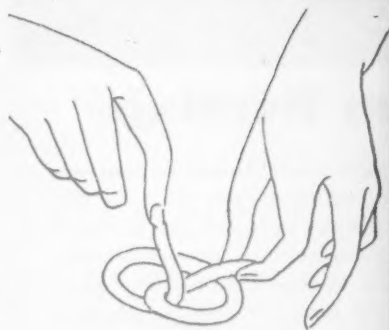
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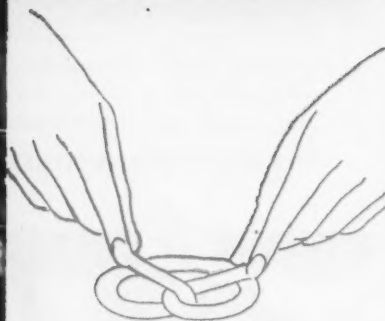
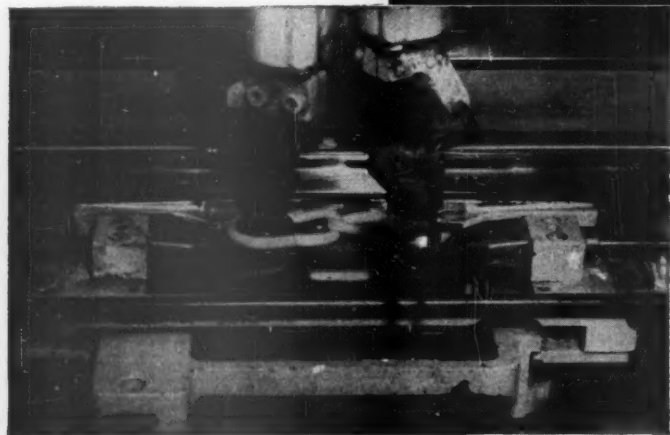
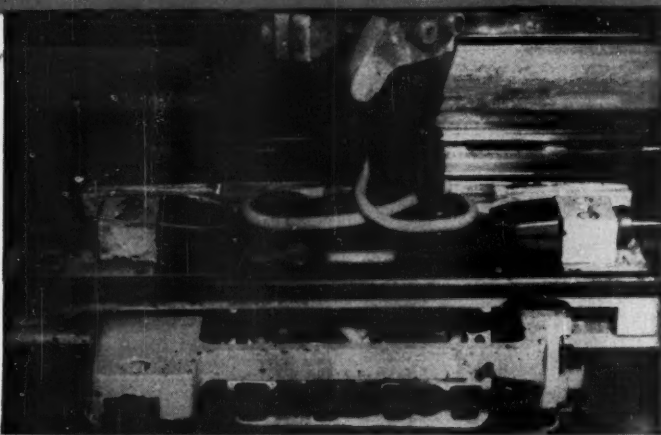


1. Grasp a string of dough

A Pretzel



2. Loop it over—so



3. Make it like a bow

HOW ENGINEERING HELPED A BUSINESS THAT WAS ALL THUMBS

You may not have noticed, but the country is being flooded with pretzels—and they have a new twist. Only ten years ago, the most modern pretzel-benders were human beings. Slow, high-cost thumbs and fore-fingers were holding pretzel manufacture and distribution down to a regional level.

Along came an idea—a food-engineering

idea: Why not develop a precision machine to "throw" pretzels? And here it is. It has 400 working parts, took 13 years to develop. But it does the work of three sets of human hands, and today 95% of all pretzels are machine-made. Today pretzels are shipped coast-to-coast in carload lots. Business is terrific—thanks to food engineering.

WITH A NEW TWIST!

SMALL WONDER the food industry buys 1/7 of ALL new manufacturing plant and equipment

Pretzels may represent small dough, as you see it. But all across the food industry, new technological twists like this are steadily building one of the world's biggest markets for manufacturing materials, equipment and supplies. This is why one-seventh of ALL new manufacturing plant and equipment is bought by the food industry—over \$900 million worth. Not to mention the \$20 billion spent each year for materials, parts, containers and supplies.

— NO WONDER food engineering is the common denominator of the big food industry

If an automatic pretzel-bender means so much, get the Big Picture: food engineering sweeping away the costly hand methods which made canning, baking, brewing, meat packing, dairying, etc., inefficient arts only 30 years ago. Today, food engineering provides the common ground on which all branches of the food field are developing into modern, high-production, low-cost units of American industry.

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Common denominator of the food industry

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the towel that's
softer to the touch*

ScotTissue Towels are a symbol of the right kind of washroom. Softer, more pleasant to the touch and more absorbent, they stay tough when wet because of a patented "Duralose" treatment. ScotTissue Towels are less expensive in the long run because one towel dries both hands.

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Trade Marks "Duralose," "ScotTissue," "Washroom Advisory Service," Reg. U.S. Pat. Off.

SCOTTISSUE TOWELS
Symbol of the right kind of washroom

MARKETING BRIEFS

Suer sued: Sunbeam Corp., which brought antitrust suit against Macy's (BW—Nov. 10 '51, p137), faces a similar suit itself. Masters, Inc., electrical appliance retailer, charges that Sunbeam's "voluntary universal contract system" violates the Sherman act. Sunbeam's recognized distributors, says Masters, agreed to sell only to retailers who observed the company's retail fair trade contract.

A customer council board is May Department Stores' latest experimental step to minimize guesswork in retailing. The paid, rotating board of 12 will confer every month with the store's policy-making executives.

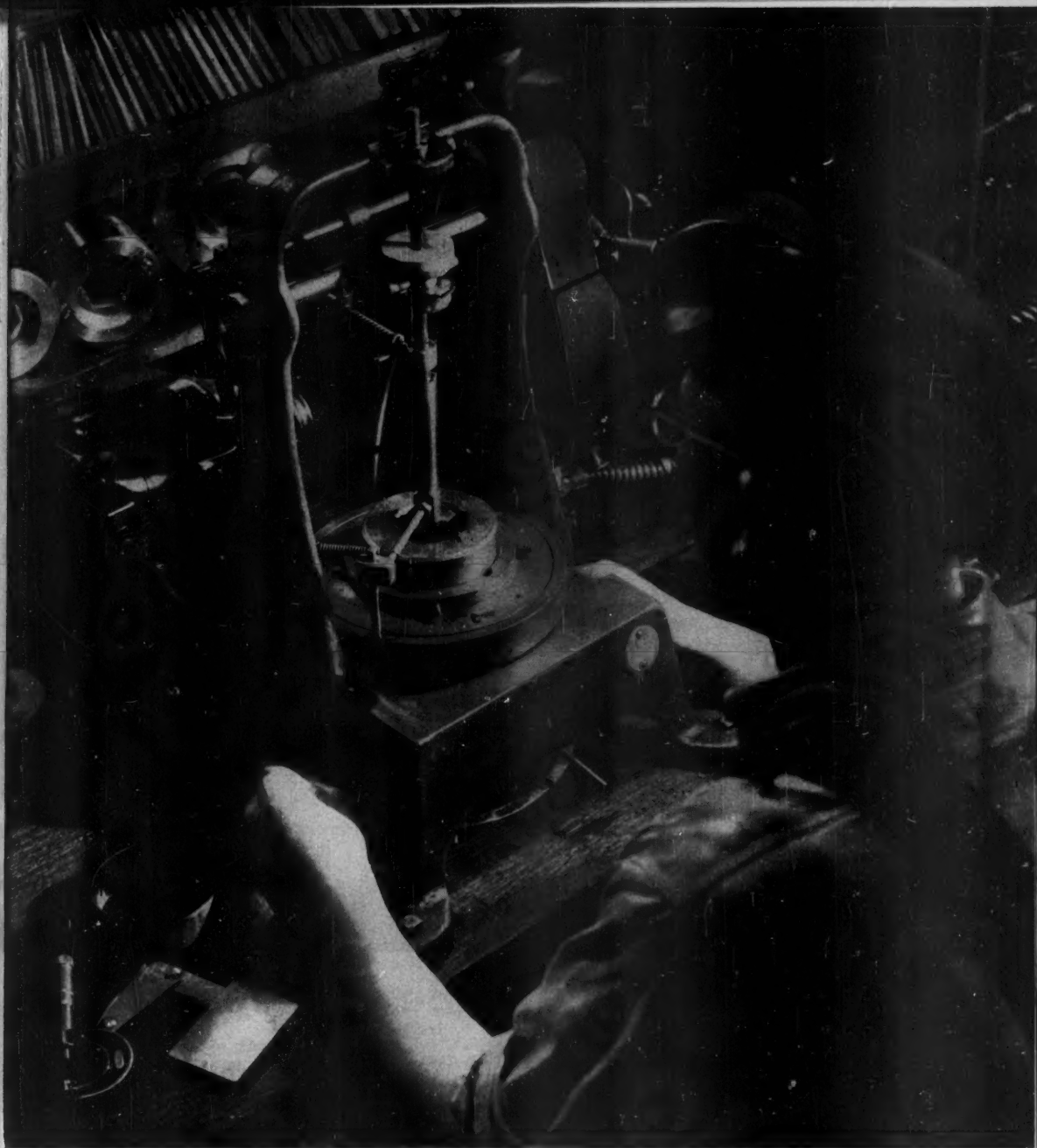
Appliance merger: Artkraft Mfg. Corp., of Lima, Ohio, bought the major appliance business of Landers, Frary & Clark, of New Britain, Conn. With Baltimore Porcelain Steel Corp., they'll form a new corporation, Universal Major Appliances Co. Morton Clark, Artkraft president, will head the new company. Artkraft has made Universal refrigerators for Landers, Frary, which will own a substantial minority interest in the new concern.

A fourth phonograph speed—16 rpm.—is in the works. Wagner Research Corp., New York, makes the record and an inexpensive attachment to fit 33½ rpm. players. They will be "talking records," mainly readings in classical literature. Zenith Radio Corp. has a phonograph that can be adapted to the new speed and is in on the promotion.

Christmas suggestion from Rheem Mfg. Co.: a Rheem automatic water heater, all decked out in red bows and gift wrapping. "An ideal family gift," Rheem calls it. The company thinks this is the first time a water heater manufacturer has ever tried to cash in on the Christmas market.

Carpet rayon use is booming beyond expectations, the Carpet Institute reports. During the first eight months this year, 22.7% of the surface fibers used in carpet output were rayon. That stacks up against only 6% for the whole of 1950, and 1.6% for 1949.

New York's dock strike cost importers some \$5-million in Christmas gift sales, the importers figure. It will take three or four weeks to clear up the mess at the docks—too late for the big buying season.

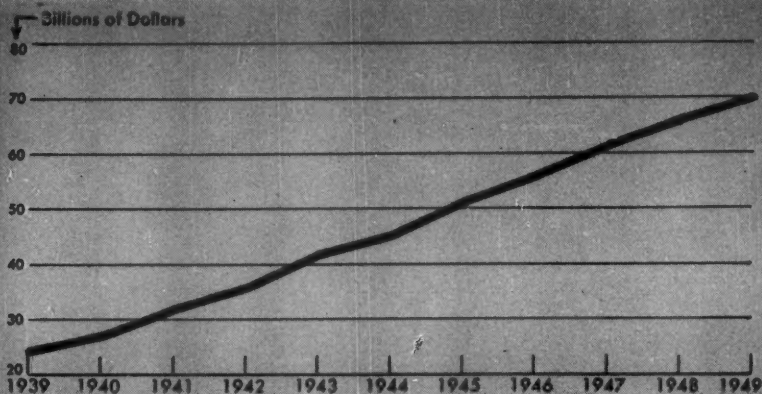


He's your man . . . one of the skilled men at Bristol Brass who design and make dies to your specifications, when you order Bristol Brass sheet, rod, or wire. He's the "anchor man" on your Bristol Brass team . . . and he will serve your interests just as faithfully and well as the best man in your own organization. The Bristol Brass Corporation, since 1860 in Bristol, Conn. Offices or warehouses in Boston, Chicago, Cleveland, Dayton, Detroit, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, Providence, Rochester.

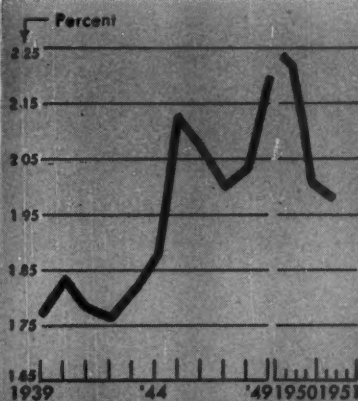
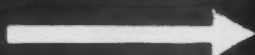
"Bristol-Fashion" means Brass at its Best

FINANCE

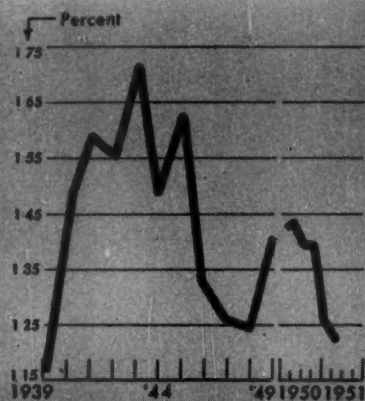
Corporate working capital keeps rising to historic highs...



... BUT corporate liquidity keeps lessening.



1 Current assets no longer cover current debts twice.



2 The quick asset ratio keeps dropping.

How Companies Can Be Prosperous—and

Working capital trends are a good indicator, but they are also a tricky one. It is the composition of working capital, rather than its size, that counts.

That's underlined by the charts above, based on the corporate working capital estimates issued regularly by the Securities & Exchange Commission. The top chart shows the records reached by working capital in recent years. But you'd be led right up the garden path if you based any prophecies on that chart alone.

The records look pretty, but the other charts show the uglier side: Corporations are getting less liquid. Take these facts from the latest (mid-1951) report:

- Current assets failed to double current liabilities. It was the lowest "current ratio" shown in the SEC estimates since the end of 1944.

- Quick assets (cash, government bonds, receivables) covered current debts only 1.23 times—the lowest ratio since 1939.

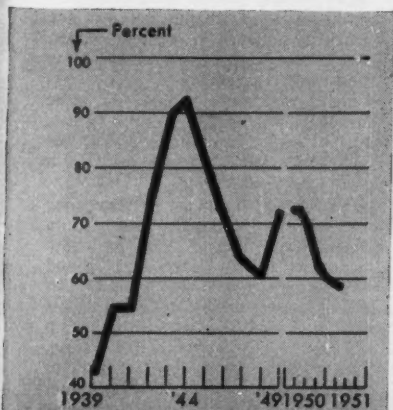
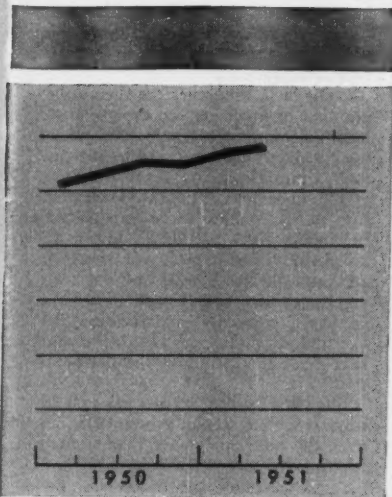
- Cash and government bonds were only about 59% of current liabilities. That's the worst showing in almost a decade.

The retrogression has been particularly marked since early last year. From Mar. 31, 1950, to June 30, 1951, the current ratio dropped off about 11%, according to the SEC. The quick asset-current debt ratio was off about 14%.

And the ratio of cash and government bonds to current liabilities took the worst fall of all, 20%.

- **More Coming**—Not all companies suffered equally, of course. But the over-all trend toward a shortage of working capital is clear. Many corporations are already feeling the pinch, including some whose cash-government bond positions looked impregnable a year or so ago.

Last week BUSINESS WEEK reporters took a look at the situation around the country. They found plenty of reasons for the erosion of working capital. Among the big ones: the rising cost of doing business; the piling up of inventory in many industries due to falling



3 So does the ratio of cash and government holdings to current debt.

Poor, Too

sales; higher taxes; slimmer profit margins; expansion programs.

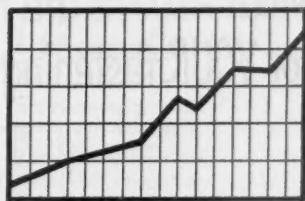
All of these have played a part already; and in future they're going to siphon off still more liquid working capital, according to most of the businessmen and bankers interviewed by BUSINESS WEEK.

• **Back to Banks**—The end result, of course, is that business in general is going to have to fall back more on bank loans. This presents, as one banker says, "a serious problem. After all, there are limits to what banks can lend—statutory limits, limits imposed by the amount of deposits that a bank has available for commercial loans, and limits imposed by the borrower's stand-

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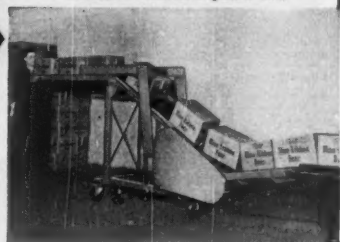


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ing as a credit risk." This banker sees trouble ahead for his own institution if the past year's flood of loan applications continues.

• **Long-Term Money**—Then there's the question of financing the expansion of facilities—money on longer terms than bank loans. That's going to be increasingly a problem, according to the head of one moderate-sized outfit. Here's his story of his troubles before he could get the money for a \$275,000 addition to his plant. "I had to go to five insurance companies before I could find one willing to advance me enough money to go ahead with my construction. All five told me that a year ago they would have made the same loan without question."

• **Steps**—Of course, certain steps could be taken that would substantially reduce the need for higher than normal borrowing:

• Companies overloaded with inventory could sweeten their cash positions considerably if they would reduce their prices enough to move the goods.

• Most corporations could prune their dividends abruptly, and thus keep a higher percentage of earnings in the corporate sock.

• **Costly expansion programs** now under way could be cut back to a greater or lesser degree.

• **Tax Money**—Taxes are another prime worry in the working capital picture (BW—Nov. 10 '51, p19). Next year many companies will have to scurry around to dig up the huge federal income taxes levied on 1951 earnings. The payments will be spread over a shorter period, for the Mills Plan will be operating. This calls for the payment of 70% of the year's taxes by June 30. The former rate was only 50%.

A number of bankers say that many smaller corporations have been "overlooking Uncle Sam, the major partner in their business today." Many have been retiring bank loans, instead of building up tax reserves. That means, one banker says, that "they've been paying off bank loans with Uncle's money. These fellows have been kidding themselves and some of them are going to be in trouble next year."

• **Dilemma**—Some will be really hurt. Take the case of one company covered by the survey. It has to equip a new plant, and it's plenty worried about the Mills Plan. One of its vice-presidents said: "We don't know whether to use what working capital we have to equip our new plant or to save it to brace us through that 70% federal tax liability period. If we have to pay 70% of our \$200,000 of 1951 taxes in the first half of next year, it is definitely going to put us in a hole. It will certainly result in a cutback in our production schedules."

Here's the truck picture in small towns...big towns...all towns!

Everything that's built, everything that's grown, everything that's bought has to get from one place to another.

Here's the job for Chevrolet trucks... the trucks that *serve more users* throughout America than any other make!

That goes for small towns and big towns, for light-, medium- and heavy-duty hauling. Chevrolet trucks are *first choice by far* among men who move the nation's goods.

The reason is clear and it explains why more than a thousand Chevrolet trucks are

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They save you money right from the start by their low purchase price. They operate at rock-bottom cost. They bring more dollars at trade-in, traditionally, than other trucks of comparable specifications.

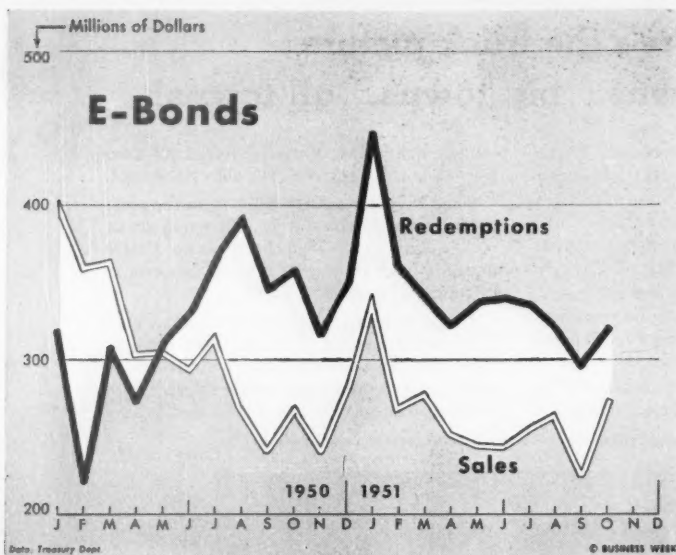
If you have a job for a truck, your Chevrolet dealer has the right truck for the job. You just can't beat a Chevrolet truck—to save your money! Chevrolet Division of General Motors, Detroit 2, Michigan.

(Continuation of standard equipment and trim illustrated is dependent on availability of material.)



CHEVROLET ADVANCE-DESIGN TRUCKS





E-Bonds: On the Downgrade

Sales are drooping; cash-ins are going up. Even an eight-week campaign by the Treasury didn't help—sales this September were the lowest in ten years.

The failure of the Treasury's eight-week campaign to sell more E-bonds leaves Secretary Snyder with two headaches, one large and one small:

- The big headache is what to do to cut down on redemptions and push sales. In spite of the best efforts of the Treasury during the drive, which started Labor Day and ended Oct. 27, the public is still turning in more E-bonds than it is buying. This has been going on since April, 1950 (chart, above). Sales during September, first month of the drive, were the lowest since November, 1941.

- The small headache is what can be done to encourage people whose E-bonds are maturing to extend them another 10 years. The first E-bonds started coming due last May. There were about \$1-billion then outstanding that were due to mature this year. So far, holders of only 22% of these bonds decided not to extend them. That's pretty good going. But it's too early yet to tell if this percentage will be maintained.

Even if most people with maturing E-bonds decide to extend them, the Treasury is going to have a sizable cash drain from maturities. About \$3.8-billion of E-bonds will mature next year, and about \$15-billion in the three years after that.

- Wall Flower—A major reason why cash-ins have exceeded sales since April,

1950, is that E-bonds are not so popular with big investors as they used to be. From the end of the war until last summer, sales of \$500 and \$1,000 E-bonds were usually a lot higher than redemptions of such bonds, while sales of the lesser denominations were usually somewhat below redemptions.

But now sales of the big bonds are down substantially, and redemptions are up. Sales of the smaller bonds are down only slightly; cash-ins of these have also climbed—though not so much as in the big-bond category.

- The Difference—People who buy \$500 and \$1,000 bonds usually have somewhat different objectives than small savers. They tend to be more interested in yield than small buyers, and more apt to be worried about the effect of inflation on the purchasing power of their dollars.

That's one big reason why they seem to have shifted into other forms of investment offering more flexibility—and sometimes higher yield after taxes—than is provided by E-bonds. E-bonds have to be held several years, and then cashed in, to provide a rate of interest comparable to the dividend rate on savings accounts, or building and loan shares, or the yield on marketable government and corporate bonds.

Before taxes, E-bonds offer a 2.9% yield if held to maturity, as compared

to dividend yields before taxes of 6% or 7% on "good" common stocks. Furthermore, equity investments like common stocks or real estate are supposed to be a better hedge against inflation than fixed-interest securities.

- Something New?—So it looks as if Snyder will have to make some kind of bid to attract the large E-bond buyer. Naturally, he isn't tipping his hand on his plans. Money-market observers think it's quite likely that he will revise E-bond redemption values so that the bonds will be more attractive for an investor who wants to hold his funds in a safe place for, say, three or four years (BW—Jan. 27 '51, p102).

Snyder might even boost the rate, as Canada and Great Britain have done with similar securities. But a lot of people think he isn't likely to do that. Treasury surveys show that most buyers of E-bonds, especially the small buyers, are more interested in the safety of their money than the interest they get on it.

Snyder will probably also have to work something out to make an extension of maturing E-bonds more alluring. Under the present setup, bond holders who elect to extend their bonds another 10 years can postpone paying income tax on their interest until final maturity. But the rise in income tax during 1951 makes this privilege seem less attractive.

Voters Limit O.K.'s To Needed Bond Issues

Voters in this month's elections showed how they felt about new bond issues.

According to Moody's Investors Service (which doesn't count issues under \$250,000) about \$641-million of tax-exempt bonds were up for the voters' approval. Leaving out the \$500-million issue for New York City subways, the public vetoed about 30% of the issues submitted. Altogether, they turned down issues totaling about \$44-million. Needed projects like schools, street improvements, and repair construction got an O.K. But projects that could wait—such as new city halls, court-houses, and parking facilities—were usually turned down.

- Approvals—In addition to the New York subway issue, others approved included:

- \$14-million for Cincinnati schools.

- \$12-million for Dayton schools.

- \$6-million for a Lansing (Mich.) powerplant.

- \$2.6-million for a Textron plant in Monroe County, Miss.

- Turndowns—Among the issues turned down were:



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In developing such products as this, Ferro speeds the solution by testing its formulations under actual production conditions. This saves time for us, saves time for our customers. The distinctive

area of Ferro's activity is where chemistry and engineering cross each other, and it has paid industry dividends to have someone completely familiar with the course of both.

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CASE HISTORY No. 123
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MERRILL LYNCH, PIERCE, FENNER & BEANE	WOOD, STRUTHERS & CO.	

November 14, 1951.

- \$6.6-million for courthouses in Montgomery County, Ohio.
- \$3,640,000 for civic improvements in Erie, Pa.
- \$5-million for sewers in Akron, Ohio.

Canadian Bulls...

... had a field day on Toronto's stock market; it broke all records in October, beat New York hands down.

Bulls on the Canadian stock markets have had better pickings this year than their brothers in New York. Prices of Canadian stocks have not only risen more sharply this year than those on the New York Stock Exchange, but in the current slump they have declined less.

The fact is that Canada has been having a roaring bull market. Trading on the Toronto Stock Exchange—Canada's major market—broke all records in October. Small speculators are in the market in force. Clerks, stenographers, elevator boys, and messengers have all been plunging in the market in hopes of a quick profit.

• **Causes and Effects**—There are many reasons for the boom. Most important: (1) growing recognition of the expansion of the Canadian economy and its potential resources, (2) fears of inflation, (3) an influx of foreign funds, not only from the U.S., but from countries like Belgium, Switzerland, and Greece.

Share trading on the Toronto exchange in October was almost 100-million shares, up 18-million from the previous peak. On two days early in the month, volume went over 74-million shares. During the same month, reported volume of the N. Y. Stock Exchange was 424-million. However, most Canadian stock favorites are cheap—the penny-arcade variety. Total volume of October trades was \$160-million. Dollar value of Big Board trades, while not yet available for October, was about \$1.4-billion in September.

• **Broken Strings**—Through most of its history, the Canadian stock market has been strongly influenced by the trend of prices in New York. For years the Toronto Stock Exchange index of industrials ran roughly parallel to, but below, the Dow-Jones industrial average. Now the Toronto market seems to have broken its apron strings. The Toronto index is running well above the Dow average. It's still influenced to some extent by what happens in New York, but it does not follow swings in the Dow average so closely as in the past.

The Toronto index rose 70 points (24%) from the start of the year to its

1951 high of 360 at the end of September. The Dow average rose 41 points (17%) to its high of 276. Since the slump started, the Toronto index has lost about 26% of its maximum 1951 gain, the Dow average about 37%.

• **The Whole Gang**—Nearly all Canadian industrial groups have been in on the act. The 10 most active industrials in October were: Massey-Harris, Great Lakes Paper, Canadian Pacific, Imperial Oil, Canadian Western Lumber, International Nickel, Brazilian Traction, British American Oil, Abitibi Power & Paper, and Bell Telephone.

A good deal of speculative activity has centered on the western oil stocks. Toronto's index of western oil shares rose 46 points from the start of 1951 to a high of 126. When the slump came, it was expected that this group would be particularly vulnerable. But it has stood the test better than any other group; the index is off only slightly from its 1951 high. Outstanding performer: Western Homestead Oil, which jumped from a 1951 low of 12¢ a share to \$1.79 and is now selling around \$1.50.

There has also been some activity in metal stocks, spurred by demand for lead, zinc, and copper. The golds, too, have had a whirl recently. A speculative favorite here is American Yellowknife Gold Mines, which climbed from a low of 6¼¢ a share to 91¢ and is now selling around 50¢.

FINANCE BRIEFS

More municipalities are building plants for leasing to Textron, Inc. (BW—Sep. 1 '51, p102). In recent weeks, voters in Meridian, Miss., approved a \$6.5-million bond issue, and voters in Monroe County, Miss., O.K.'d \$2.6-million. The issues are for two plants in Textron's southward migration (page 32).

How high are taxes—really?, ask the heirs of Charles S. Woolworth, co-founder of the Woolworth chain. Federal and state inheritance taxes, Scranton (Pa.) reports say, have eaten up \$10-million of the \$16.4-million estate.

The Midwest Stock Exchange in Chicago isn't doing at all badly. Its trading volume in the first 10 months of this year ran 134% above the year-earlier figure. The corresponding gain on New York's Big Board was 86%.

Government payments—federal, state, and local—to individuals last year totaled some \$35.2-billion, 16.2% of all personal income, the Institute of Life Insurance reports. Back in 1929 such payments approximated only \$6.1-billion, 7.3% of personal income.

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THE MARKETS

Commodities: Prices Start to Firm Again

	Eve of Korea	Korea High	1951 Low	Latest Price
Barley bu.	\$1.675	\$1.74	\$1.315	\$1.60
Burlap (yd.)	.164	.34	.25	.252
Butter (lb.)	.599	.716	.661	.715
Cocoa (lb.)	.325	.428	.30	.30
Coffee (lb.)	.485	.565	.528	.545
Copper (lb.)	.225	.245	.245	.245
Corn (bu.)	1.51	1.89	1.61	1.83
Cotton (lb.)	.338	.452	.343	.434
Cottonseed oil (lb.)	.154	.267	.165	.168
Hides (lb.)	.258	.435	.25	.33
Hogs (cwt.)	20.25	25.50	18.25	18.25
Lard (lb.)	.109	.20	.152	.152
Lead (lb.)	.115	.19	.17	.19
Print cloth (yd.)	.152	.24	.148	.165
Rubber (lb.)	.282	.79	.52	.52
Steel scrap (ton)	37.50	45.00	41.50	41.50
Steers (cwt.)	29.25	37.875	35.125	35.685
Sugar (lb.)	.058	.068	.0585	.06
Tallow (lb.)	.048	.182	.085	.085
Tin (lb.)	.764	1.83	1.03	1.03
Wheat (bu.)	2.11½	2.52	2.285	2.52
Wool tops (lb.)	2.00	4.145	1.865	2.25

Data: Bureau of Labor Statistics

Crop Shrinkage Boosts Prices

All over the world, farm production is falling a bit behind expectations. Early frosts nip U.S. corn. Wheat sells at highest levels since Korea.

Farm crops around the world are going to be a bit shorter than expected. That's why farm commodities are firming up again (table, above). This is going to affect your grocery and clothing bills, as well as the prices of some industrial raw materials.

U.S. corn, for instance, was hurt by early frosts. Corn that's been nipped is soft, has to be fed to livestock fairly soon to prevent spoilage. That means less corn available later on. So prices are going up.

Feed grains such as grain sorghum look a bit short now in relation to the heavy hog, cattle, and poultry population. Meanwhile, the Canadian oat crop has been delayed getting to market.

• **Highest Since Korea**—Wheat is now selling at its highest levels since Korea. That's because the Argentine and Australian wheat crops were short this year. And the Canadian crop, whose harvest was hampered by early snows, will prob-

ably be damaged and certainly will be late getting to market. At the same time, exports of U.S. wheat have been running about double last year's rate.

Cotton prices have been pushed up by the government's jawbone campaign (page 188), plus the latest estimate that this year's crop, though very large, would be 7% less than expected earlier.

This rise in cotton prices has had some effect on fats and oils. Cottonseed oil has risen slightly. But lard, a competitor, hasn't gone up at all. That's because of the current heavy supply of hogs, now moving to city stockyards in seasonally large numbers.

• **Meat**—The current high level of hog slaughterings is keeping hog prices weak. They're still at the year's low. Steers are doing better. There has been a drop in steer prices since the current big run to stockyards began (BW—Nov. 10 '51, p. 24), but steer prices have re-

gained almost all of their year's losses.

Some observers think, though, that beef prices will get weaker, along with pork. They figure high feed prices may make cattle raisers send their steers to the packinghouses sooner than they had previously planned.

The big run of cattle—plus consumer apathy to new shoes—is keeping hide prices at 1951 lows. Sugar has gained a bit since the government announced smaller import quotas for 1952. But it's still a long way below the Korean high.

Korean-Market Profits Shrinking

	Pre-Korean Level	Range Since High	Low	Recent Level	Korean Market Gains Maximum	Now
Industrial Commons						
Standard & Poor's Average.....	159.5	206.7	142.9	195.4	29.6%	22.5%
Air Reduction.....	\$23.25	\$31.50	\$20.50	\$26.00	38.5	11.8
Allied Stores.....	38.00	48.50	32.75	40.75	27.6	7.3
American Locomotive.....	14.50	24.50	13.25	20.25	69.0	39.7
American Smelting & Refining.....	54.50	103.25	50.00	96.00	39.4	76.0
American Woolen.....	26.00	46.87	24.75	41.00	80.3	87.7
Anaconda Copper.....	32.12	52.00	29.00	50.87	61.9	56.4
Bethlehem Steel.....	38.00	60.00	34.25	49.37	87.9	29.9
Bristol-Myers.....	25.00	40.50	23.37	36.50	63.0	46.0
Celanese Corp.....	37.00	58.25	31.00	48.00	87.4	29.7
Chrysler Corp.....	80.00	84.50	62.50	66.37	8.6	-17.0
E. I. du Pont de Nemours.....	80.00	102.50	65.50	84.00	38.1	8.0
General Electric.....	49.12	63.87	41.25	55.37	30.0	13.7
General Motors.....	48.62	54.75	38.06	49.62	12.6	3.1
Gimbel Bros.....	18.00	24.87	14.75	19.12	38.2	6.2
B. F. Goodrich.....	32.92	66.50	27.66	57.25	102.0	73.9
Gulf Oil.....	36.00	58.12	31.25	49.50	61.4	37.5
International Harvester.....	28.37	37.37	25.12	33.62	31.7	18.6
Johns-Manville.....	49.00	70.50	36.50	69.75	43.9	48.3
Radio Corp.....	22.00	25.25	14.62	21.87	14.8	-10.8
Republic Steel.....	38.50	49.50	33.25	42.50	38.6	10.4
Sears, Roebuck.....	47.87	58.00	40.00	56.50	31.2	18.0
E. R. Squibb.....	18.37	29.62	14.75	22.37	61.2	21.8
Standard Oil (N. J.).....	39.12	72.25	34.81	69.87	84.7	78.6
Swift & Co.....	37.00	40.00	32.00	33.00	8.1	-10.8
Union Carbide & Carbon.....	49.00	66.62	40.12	54.87	36.0	13.0
United Aircraft.....	28.00	41.12	26.50	30.12	46.9	7.6
United States Rubber.....	44.00	80.87	38.37	70.00	33.8	59.1
United States Steel.....	36.00	47.75	31.00	39.75	32.6	10.4
West Virginia Pulp & Paper.....	54.50	95.50	44.50	82.00	75.2	50.8
Westinghouse Electric.....	36.00	42.50	29.12	38.00	18.1	8.8

Utility Commons

Standard & Poor's Average.....	112.5	116.5	101.3	115.2	3.6	2.4
Cleveland Electric Illuminating.....	\$45.37	\$50.50	\$38.37	\$50.12	11.3	10.5
Commonwealth Edison.....	32.00	31.50	26.37	29.87	-1.6	-6.6
Consolidated Edison.....	32.75	32.25	26.12	32.25	-1.5	-1.5
Consol. Gas, El. Lt. & Power.....	27.00	26.25	23.00	25.75	-2.8	-4.6
Detroit Edison.....	23.87	23.62	21.37	22.12	-1.0	-7.3
New England Electric.....	12.75	12.87	10.25	12.37	0.9	-3.0
Pacific Gas & Electric.....	35.37	34.75	30.50	33.87	-1.8	-4.2
Philadelphia Electric.....	27.00	30.00	23.37	29.00	11.1	7.4
Southern California Edison.....	36.00	35.25	31.25	34.00	-2.1	-6.6
Southern Co.....	12.25	12.25	10.25	12.00	-2.0

Railroad Commons

Standard & Poor's Average.....	108.6	163.0	102.5	145.1	80.1	33.6
Atchafalaya, Topeka & Santa Fe.....	\$59.12	\$89.87	\$54.37	\$73.00	52.0	23.5
Atlantic Coast Line.....	46.75	82.00	43.00	74.00	75.4	58.3
Chesapeake & Ohio.....	27.00	38.25	25.00	34.00	41.7	28.9
Chic., Milw., St. Paul & Pac.....	11.25	30.00	9.25	18.63	166.7	68.6
Great Northern (Pfd.).....	35.87	57.75	33.75	50.00	61.0	39.4
Illinois Central.....	41.00	75.25	36.00	54.75	84.8	33.5
Louisville & Nashville.....	35.75	59.50	35.00	50.00	66.4	39.9
New York Central.....	13.50	26.25	11.62	17.25	94.4	27.8
Pennsylvania.....	16.00	26.25	14.75	17.63	64.1	10.2
Southern Pacific.....	55.75	74.37	50.50	62.00	33.4	11.2
Southern Railway.....	36.75	64.00	33.25	50.00	74.1	36.1
Union Pacific.....	85.12	109.50	81.00	98.50	38.6	18.7

N.B. Prices have been adjusted for stock splits where necessary.



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DEFENSE BUSINESS

Anaconda Aluminum Gets Wary O.K.

● Justice Dept. says it won't object to proposed partnership with Harvey Machine Co. to produce primary aluminum.

● But it will keep a watchful eye on the whole project to make sure there is no monopoly.

● Capacity planned for the Kalispell works would boost aluminum output above present goals. But there is talk of setting the target still higher.

● So DPA has its eye on yet another prospective new producer.

The Justice Dept. is willing, under pressure of mobilization, to let the government try to bring Anaconda Copper Co. into the aluminum industry (BW-Nov.10'51,p20). But the anti-trusters make it clear they will keep a sharp eye on the deal to stop any growth of monopoly.

If, by any chance, the Anaconda deal doesn't come off, Defense Production Administration has still another ace in the hole—Olin Industries, Inc., which is playing with the idea of becoming a producer of primary aluminum.

• **Reservations**—Cautious approval of the proposed Anaconda arrangement came in informal word to DPA this week to go ahead and announce the partnership between Anaconda and Harvey Machine Co. to make aluminum at Kalispell, Mont.

The Kalispell project originally was Harvey's idea. For some time Leo Harvey tried to borrow \$46-million from the government to go it alone. But officials in charge of resources expansion had ideas of their own. They felt that the project needed big business backing, that they couldn't afford the risk otherwise. They suggested they would clear the way only if Harvey took on a wealthy partner. The logical partner was Anaconda, which has wanted to produce aluminum for a long time and could raise the needed cash. Harvey gave way to Anaconda's taking over the \$50-million project.

On its present basis, the proposed arrangement has Justice Dept. approval. But Justice left no doubt that it had reservations. It wants to take another look at the deal when details of the partnership are worked out. And it pro-

poses to keep a close watch over the performance of the partnership after it goes into metal production.

• **Had Its Chance**—Justice could have stopped the deal with a flat no, or even with a strongly worded objection. DPA wouldn't have gone ahead over



"Where to Next?"

A lift-truck operator at the Fort Worth division of Consolidated Vultee Aircraft Corp. gets his work assignments over a new two-way radio system. A centrally located control unit on the plant reservation dispatches the radio-equipped vehicles. Vultee thinks the increased efficiency and reduced mileage on radio-equipped vehicles may save the company as much as \$30,000 a year.

such opposition. It chose a more cautious role—that of voicing objections, but not killing what DPA boss Manly Fleischmann called the country's best chance of getting more aluminum in a hurry.

DPA was ready to announce the Anaconda-Harvey partnership three weeks ago. It delayed to give Justice a chance to say "no" if it wanted to.

DPA's formal approval means the new partnership will obtain the certificates of necessity previously prepared for Harvey's sole use. DPA also ordered Defense Materials Procurement Agency to negotiate with Anaconda-Harvey for government purchase of the new plant's output.

• **Share Alike**—The partner's primary worry, however, scarcely could be over an assured market for their ingot and pig; both are big consumers of aluminum. The reason they want the government to underwrite production is that it will help in getting scarce materials like structural steel and electrical equipment. In return for the purchase agreement, Anaconda-Harvey will share a stated part of their output with independent fabricators.

• **Not Enough?**—DPA approved 72,000 tons annual capacity for the new venture. This puts expansion projects now approved at 677,000 tons since Korea—well over the 650,000 target mobilizer Charles Wilson set for himself.

There are signs that this enlarged target will not be big enough. DPA boss Manly Fleischmann stressed that he is still studying the possible need of more capacity, in light of the growing substitution of aluminum for copper (BW-Oct.13'51,p17). And around DMPA-RFC—where all prospective aluminum producers go these days for encouragement—there is a flurry of interest in the plans of John M. Olin.

• **Another Reserve**—The head of Olin Industries, Inc., first came to the government for priority help in case he decided to build an aluminum rolling mill. He came back last summer with the idea of becoming a producer of primary aluminum himself. But he talked to the wrong people—the old Defense Minerals Administration, just before Truman knocked that agency on the head.

Now Jess Larson, as head of DMPA, has discovered Olin as a prospective new producer. It's a good bet that if the Anaconda-Harvey deal fails to go through, or if more aluminum production is wanted, Olin will be on an inside track.

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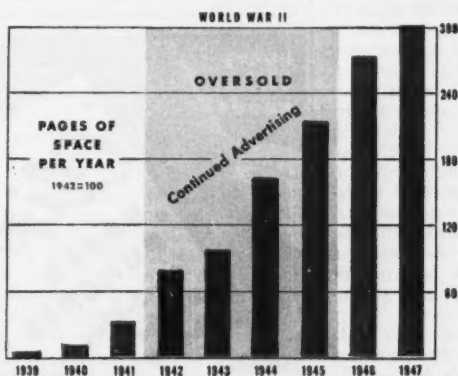
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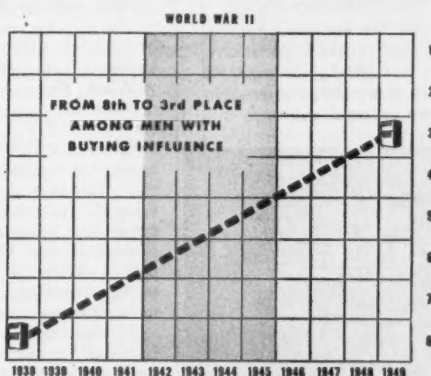
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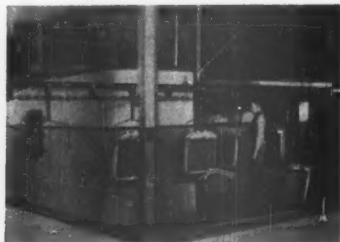
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More Minerals

New procurement agency gets under way. Accent is on advances against production, rather than on loans.

Defense Materials Procurement Agency—patched together by Jess Larson with spare parts from other agencies—began running this week under its own power.

The job of expanding domestic mineral output went to James Douglas, Phelps-Dodge official and former deputy director of Defense Minerals Administration. He will also serve as an assistant to Howard I. Young, deputy director of DMPA.

• **First Decision**—As it got under way, DMPA made its first important policy decision. This was that it's better—where government cash is needed to start new mines or expand existing ones—to buy future output of the mine, paying for it in advance, than to loan money. The advantage to DMPA is that it can approve the advances itself. Loans have to be O.K.'d by Reconstruction Finance Corp. in a separate operation.

DMPA also promised to come up with a decision on how to expand zinc production—a problem that has split government officials since the early days of mobilization. Two plans have already been proposed: (1) a guaranteed price over a period of four or five years; (2) the payment of premium prices to producers who increase output over a base period. DMPA said it would soon announce a plan of its own.

• **White Pines**—A third major policy decision will have to be made as a result of RFC's \$57,185,000 loan to White Pines Copper Co. for development of an ore body in northern Michigan. The money will be used to develop the mine, and for a mill, smelter, powerplant, railroad, and townsite. The problem facing DMPA is whether a project financed with government money should also be granted a government purchase contract.

Purchase contracts have been made by DMPA covering privately financed expansion—with Anaconda, for example, which will spend \$32,750,000 developing its copper deposit in Lyon County, Nevada. Anaconda will produce 30,000 tons a year, and DMPA agreed to pay 25¢ per lb. for 256-million lb. of copper from the project.

A similar deal, covering an important part of the 35,000 tons a year expected from White Pines, would—in effect—underwrite the government's own money. So far, DMPA hasn't encouraged such deals on the grounds that

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they offered too much to producers. But officials think White Pine will push them for a clear-cut decision.

• **Abroad**—Domestic expansion wasn't the only phase of its program on which DMPA got down to cases. Its foreign expansion projects were assigned to Charles Stott, who was in charge of similar work for ECA. Stott will divide the world into six regions, with a manager for each stationed abroad. He, too, is going to operate largely with advances against production rather than loans.

The job of estimating minerals output and needs—and suggesting ways of bringing the two into balance—was given to Tom Lyon. He performed the same job under DMA and was transferred from Interior Dept. to DMPA.

DMPA's fourth operating division will present the mining industry's needs for machinery, supplies, manpower, and utilities, such as access roads, to National Production Authority. For this job it picked up another old Defense Minerals hand—Harold Montag.

NPA Eyes Low-Cost Lines

It reports that a few of them show signs of drying up, with some shifting in lawn mowers and electric washing machines. Agency says situation isn't serious yet—but.

The government is again looking at output of low-cost consumer goods.

It's not the first time. Months ago mobilization director Wilson ordered the National Production Authority and the Office of Price Stabilization to make sure that manufacturers kept turning out low-cost lines. So far, neither agency has found anything to get excited about.

Now NPA has turned up some developments it thinks may lead it to a crackdown. These include:

Lawnmower makers, whose steel allotments will be cut to 50% of pre-Korea use in the first quarter of 1952, appear to be shifting heavily to power mowers. Next year that means fewer hand mowers, which cost only a fraction as much as the power models. NPA was tipped off by gasoline motor producers when they asked for more metal for increased orders from mower makers.

Electric washing machines are going automatic. That doesn't worry urban consumers, the majority of whom refuse to buy the wringer-type washers any more. But rural people and those in other areas with inadequate plumbing and water-heating facilities are likely to suffer if the trend toward output of only automatic washers continues.

There are similar cases. NPA is watching all of them, but it's not yet viewing with alarm, for two reasons.

• **Low-cost lines** of nearly all types of consumer goods are generally available at the retailer level.

• **The switches to higher-cost lines**, with the two exceptions noted, are largely in nonessential products—some jewelry and other personal-use items.

Wilson's instructions to NPA are to maintain "low lines" in critical production. It's the same kind of thinking that impelled the World War II controllers to order production of low-cost shoes, shirts, other textile products.

• **Soft Goods**—This time, of course, soft goods prices present no such prob-

lem; prices have been kept low by lack of consumer demand. Most essential hard goods also have been in ample supply.

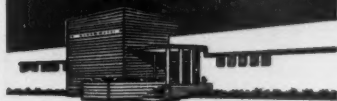
From the manufacturers' end of the pipeline increasingly tougher materials allocations are beginning to bite into supply. Most consumer goods makers are limited to 50% of their pre-Korea steel supply, 35% or less of their copper and aluminum, for the first quarter. They'll get no more—possibly less—in the second quarter. That spells shortages of many items in retailers' hands by next May or June, NPA thinks.

If they're right, NPA and OPS will have to move them to preserve low lines. NPA will use the same mechanics employed by WPB in World War II: earmarking of part of each manufacturers' materials allotments for low price items. OPS has thought of nothing better than OPA's wartime allowance of wider profit margins for low lines.

The Pictures—Cover by Hans Wild, Magnum. Acme—30 (rt.), 46 (bot. rt.), 184; Bell Aircraft Corp.—132 (ctr. rt.); Jack Birns, Space—122, 123, 126; Boeing Airplane Co.—174; Cal-Pictures—144, 145; Consolidated Vultee Aircraft Corp.—168; Combine—182; General Motors—64, 152; Joern Gerds—138, 139; Harris & Ewing—46 (bot. lt., bot. rt.); Hughes Aircraft—132 (bot. rt.); Int. News—22 (top lt.), 30 (ctr.), 46 (top ctr.); Bob Iser—24, 25; Rudolph E. Leppert, Jr.—38; McGraw-Hill World News—21; Pan American World Airways System—22 (bot. lt.); Johna Pepper—74, 75, 76, 77; Reni—40; Wide World—23, 30 (lt.), 42, 46 (top lt.), 132 (ctr. lt.); Dick Wolters—78, 80, 82, 84, 86, 88, 90.

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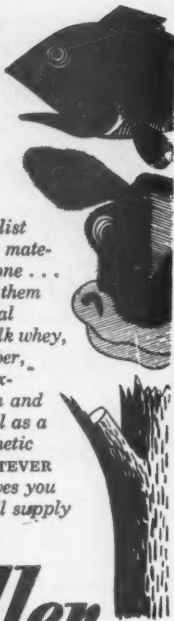


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OF ALL KINDS!**

Steel mills and foundries need more scrap.

Not just "production" scrap from metal-fabricating plants . . . but also all sorts of *idle* iron and steel—from all types of plants.

Search your plant for this idle metal . . . work with your local scrap dealer to increase supplies of badly-needed iron and steel scrap.

What to look for . . .

obsolete machines, tools and equipment, no-longer-used jigs and fixtures, worn-out or broken chains, wheels, pulleys, gears, pipe, tanks, drums and abandoned metal structures. Non-ferrous is needed, too!



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If Work Space Gets Too Crowded . . .



. . . Build Balconies for Expansion

Expanding defense industries find more work space a clamant need. But with building costs soaring and construction materials scarce, running up a new plant has become a costly, tough, and time-wasting affair.

In Seattle, Boeing Aircraft Co. found a handy answer. Wherever high factory ceilings and low headroom needs permitted, Boeing built balconies. Six of the balconies have found space under the Boeing roof. Individually, they range in size from 1,250 sq. ft. for the industrial engineering department to 34,000 sq. ft. for the tooling engineering department.

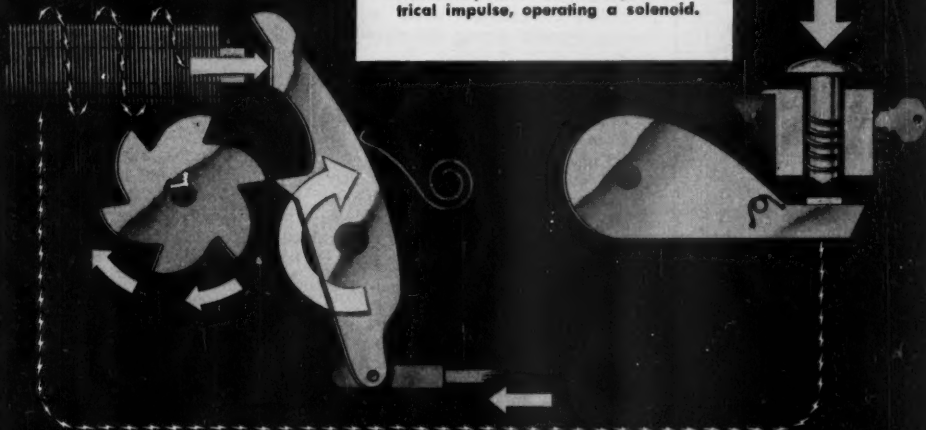
In all, the balconies have added 49,300 sq. ft. of keenly needed space.

Mostly, they are used for engineering, but stationery stores, production blue-prints, and physical research departments have all found niches in the over-head offices.

Boeing has found lots of advantages in the balconies. For one thing, the same amount of floor space would have cost twice as much if a new building had been run up. A good half of the work was done by Boeing's own maintenance department. Comparatively few alterations had to be made in the existing plant.

The company finds the balconies give an advantage of centralization. Offices and shops are closer together, and efficiency prospers.

An example of **TRANSFER MOTION**
... in which motion is transmitted
from one point to another by an elec-
trical impulse, operating a solenoid.



If it needs to behave like a latch, a lock, or a linkage...
we can create it...mass produce it...**WITH STAMPINGS!**



sign and produce both.

The "motion" illustrated above is one in which our research and engineering ingenuity have been applied in the development of a mechanism designed for electrical operation of an automobile door—for General Motors' experimental Le Sabre car. Just as Le Sabre represents forward-looking automotive design, so does Standard Products engineering "look ahead" in the design of special types

You may want a motion device that can be operated electrically—or manually. We de-

of motion-mechanisms. We can design similar mechanisms to operate either electrically or manually—or both.

Furthermore, by employing modern mass-production and machine assembly techniques, we can make such motion devices with *stampings* ... to keep the cost unusually low.

For further information about our facilities, write for a copy of our booklet, "We Make Motions".



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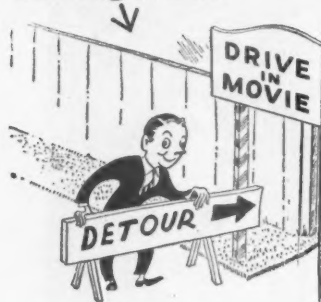


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who to sell —
when to sell

CHECKLIST: Defense Regulations

The following listing and condensed description cover all the materials and price-control regulations issued by the defense agencies during the preceding week.

Full texts of the materials orders may be obtained from National Production Authority, Washington 25, or from any Dept. of Commerce regional office.

Full texts of the price orders may be had from the Office of Price Stabilization, Washington 25, or from the regional OPS office in your area.

Materials Orders

Copper raw products: Permits persons authorized to purchase copper raw materials to place advance orders for and accept delivery on the first of each month up to 50% of the quantity of similar materials they were authorized to use during the previous month. M-16, Dir. 1 (Nov. 19).

MRO for export: Removes the following items from Order M-79, which covers maintenance, repair, and operating materials for export: replacement parts for machine tools, parts and accessories for motor vehicles, specialized industrial gloves and leather industrial belting and abrasives. Also limits laboratory supplies, instruments, and equipment to items of a unit value of not more than \$750. M-79 as amended (Nov. 19).

CMP materials to retailers: Permits retailers who customarily sell insulated copper wire, nails, and other steel, copper, and aluminum controlled materials to the general public to self-certify authorized controlled materials orders to obtain limited quantities of such materials. The order does not apply to installers of equipment such as television antennas, household appliances, or commercial fixtures. M-89 (Nov. 19).

Pricing Orders

Funeral cars, ambulances, and motor scooters: Makes clear that CPR 30 covers manufacture of hearses, flower cars, and other funeral cars, ambulances, and motor scooters. CPR 30, Amdt. 21 (eff. Nov. 14).

Processed ducks: Extends until Nov. 27 the mandatory effective date of CPR 79 establishing ceiling prices for ducks dressed and prepared for market. CPR 79, Amdt. 2 (eff. Nov. 12).

Used passenger automobiles: Sets dollars-and-cents ceilings for each body style, line, or series of each make of

used passenger car for years 1940 through 1951 as listed in Appendix "A" under three geographical regions. These ceilings to be reduced at the rate of 2% every calendar quarter beginning Jan. 1, 1952. CPR 94 (eff. Nov. 20).

Antimony: Sets dollars-and-cents ceilings on all sales of antimony metal, including those by an importer or exporter. CPR 96 (eff. Nov. 21).

Turned and shaped wood products: Provides a method for manufacturers of turned, shaped, and other allied wood products to determine ceiling prices. CPR 95 (eff. Nov. 21).

Canned tomato products: Extends until Nov. 29 the termination date of the temporary pricing method of calculating ceiling prices of certain canned tomato products. CPR 55, SR 4, Amdt. 2 (eff. Nov. 14).

Edible molasses: Exempts edible molasses from all price control at the producer level. Wholesale and retail ceilings will continue to be established under percentage markup provided in CPR 14, 15, and 16. GOR 7, Amdt. 6 (eff. Nov. 16).

Frozen fruits and vegetables: Extends until Dec. 3 the effective dates of the frozen fruits and vegetables ceiling price regulations. CPR 81, Amdt. 3; CPR 82, Amdt. 3 (eff. Nov. 15).

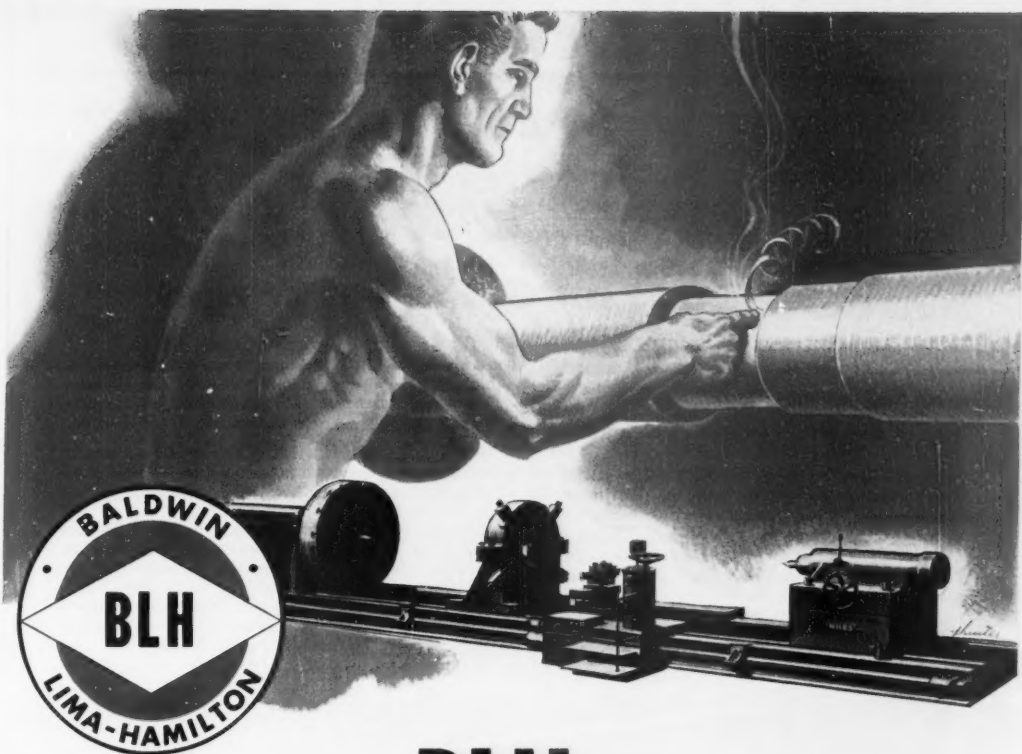
DEFENSE BUSINESS BRIEFS

NPA told consumer goods makers that the best chance of avoiding further cuts in materials was to prove that unemployment would result. The industry will bring in studies to try to influence second-quarter allotments.

Users of aluminum urged DPA to put a high-cost plant at Baden, N. C., into production. It would require government directives to put power into the plant, which is capable of turning out 1.6-million lb. a month.

To prevent copper from becoming the limiting factor in auto production, its use should be reduced one-third, NPA told the industry. A reduction of this size could mean 250,000 more cars per quarter. The government urged, in particular, a switch from copper to aluminum in radiators.

Color television ban is official now. NPA put out the order (M-90) this week. It forbids production after Nov. 20 of color sets black and white adaptors, except for the following purposes: experimental and developmental work, defense needs, industrial sets for use on closed circuits, and hospital and educational uses.



HOW **BLH** ENGINEERING *helps output take a turn for the better*

What does Baldwin-Lima-Hamilton mean to you? It depends on who you are and what you do, for the name symbolizes a lot of different things to a lot of different people.

If you are a manufacturer, for example, you are concerned with machine tools . . . and *machine tools* mean Niles, a century-old name in industry, and an important member, today, of the Baldwin-Lima-Hamilton family.

Notable Niles achievements include the design and manufacture of some of the largest machine tools ever made . . . lathes with 10-foot swings,

boring mills with 43-foot tables, planers with a 15-foot clearance between housings.

To the railroad man Baldwin-Lima-Hamilton means *locomotives*; to highway constructors, it means *Lima*, and Austin-Western *earth-moving* and *road-building* equipment; to others it means *hydraulic turbines*, *testing equipment*, *diesel engines*, *propellers*, *industrial presses*, *large valves*, *steel forgings* or any of a score of other products in use in industry throughout the world.

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SPEED NUTS score *"direct hit"* on Globe Jet Target

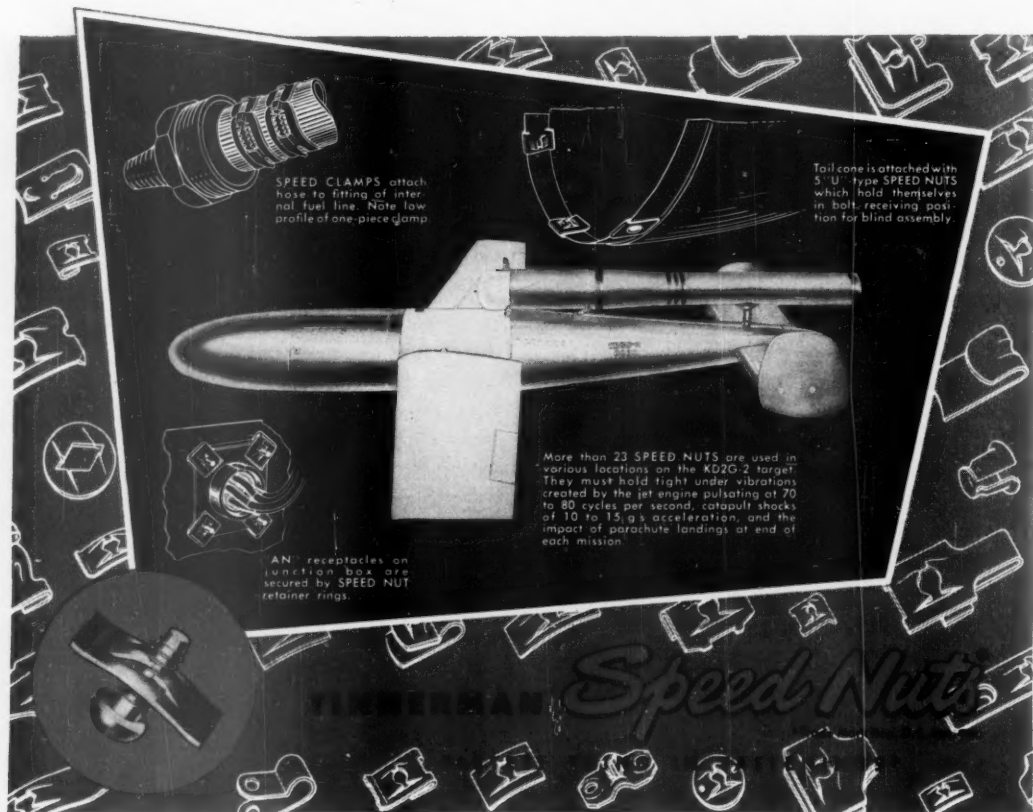
How SPEED NUTS "shot down" cost of assembly, saved time and ended vibration-loosening problems on Globe Jet Powered aircraft targets.

Speeds attained by the Globe KD2G-2 jet target are high enough to provide the realistic touch of actual air-to-air or air-to-ship attacks. This sleek craft is the result of over three years of development work by Globe Corporation, Aircraft Division, Joliet, Illinois, in cooperation with the Navy Department, Bureau of Aeronautics.

Globe engineers had to plan assembly of the target with fasteners that could take intense vibration. Of

all those tested, Tinnerman SPEED NUTS made the biggest hit. *Not only did SPEED NUTS end vibration loosening problems, they also provided an average time-savings of 48% per application over other methods.*

Globe is justifiably proud of the jet target, one of the achievements that stands out in its 50th anniversary year. And Tinnerman is proud of its part in this success. Perhaps your company can use the valuable experience gained by Tinnerman on this and many other projects. Write for information on our comprehensive Fastening Analysis Service. TINNERMAN PRODUCTS, INC., Dept. 12, Box 6688, Cleveland 1, Ohio. In Canada: Dominion Fasteners Limited, Hamilton. In Great Britain: Simmonds Aeroaccessories, Limited, Treforest, Wales.



INTERNATIONAL OUTLOOK

BUSINESS WEEK

NOV. 24, 1951



The Acheson-Vishinsky duel over disarmament isn't what counts most in Paris these days.

It's a behind-the-scenes job that's really occupying Acheson—cementing the cracks in the North Atlantic Treaty Organization. Until the U. S. glues NATO together again, there can be no real negotiations with the Russians.

Of course, the U. S. will push its disarmament plan—just in case Moscow decides some day that it is time to talk. And from now on Acheson will avoid the tough language he used at the start in Paris. That hurt us with our allies.

The basic problems with our allies will get a going-over at the NATO meeting in Rome, which starts this weekend.

Big item on the agenda will be Eisenhower's accelerated schedule for the European army. The general now wants about 50 divisions by the end of 1952—35 of them battle-worthy, the rest ready for equipment and training.

Rome won't give more than approval "in principle" to Eisenhower's plan. Final decisions can't come until the next NATO meeting in January or February.

By then, it's hoped that two things will have been settled:

(1) How big a rearmament load the West European economy can carry and how much more U. S. aid is needed.

(2) Whether West Germany is really going to contribute forces to Eisenhower's army.

So far, Harriman hasn't got very far with his study of Western Europe's rearmament potential.

But it's already clear that Eisenhower's new schedule can't be met unless the U. S. comes through with a lot more help:

- More military end items—guns, tanks, etc.—right away, even if that means taking them away from American forces now training in the U. S. (BW-Nov. 17'51, p15).

- More economic aid under the mutual security bill, even if that means a deficiency appropriation by Congress.

Eisenhower's plan calls for 12 German divisions. But right now there's no certainty that NATO will get any German forces at all.

On the one hand, Chancellor Adenauer has stiffened his price. On the other, the French are clinging to their plan for a European army, which looks more and more complex every day.

The U. S. is set to lay down the law to both Paris and Bonn.

Bonn may be told: If there's no German contribution to NATO, you can forget the generous U. S. economic aid that you've had under the occupation and have been promised for the future.

Paris may be told: Unless rapid progress is made on the European army, German forces will be recruited early next year under the direct authority of Eisenhower.

Still, tactics like these won't guarantee a solution.

Don't let the cease-fire jockeying in Korea take your eye off possible long-term developments in the Far East.

British experts think the Reds will keep Western forces tied down in Asia indefinitely. These experts back up their theory thus:

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

NOV. 24, 1951

In a recent Moscow speech, M.V.D. Chief Beria talked aggressively, claimed "our strength equals America's."

Big supplies of Soviet equipment are steadily reaching the Chinese forces—big enough to suggest that Stalin might even be transferring part of his Eastern Red army westward. In other words, China will be relied on to guard Russia's back door on the Pacific. And that would profoundly change the world balance of power.

•
The State Dept. has just about given up hope of an Iranian settlement—as long as Premier Mossadegh remains in office. That's how the British have felt all along.

Now both Washington and London are waiting to see what kind of reception Mossadegh will get when he arrives in Teheran. There's mounting hope that the non-Communist opposition in Iran's Parliament may produce a more reasonable leadership.

The Communist Tudeh Party, however, promises it will assassinate any Iranian who tries to make a deal with the West.

•
The U. S. will stall consideration of Iran's bid for a loan—at least until there's some sign of a real desire for an oil deal.

Mossadegh brought that on himself by overplaying his hand in Washington. He asked for U. S. aid to the tune of \$120-million. Then he topped off the request with thinly disguised blackmail: If there's no aid, he said in effect, Iran will go Communist.

•
The outlook in Egypt may not be so black as it appears on the surface.

Inside Egypt, there's talk of a split between the ruling Wafd Party and extremist groups like the Moslem Brotherhood. And King Farouk still wields important influence; he has warned the Wafd not to play ball with the Russians.

The Egyptians haven't done so well at the Paris United Nations meeting, either. They tried to line up a united Arab front against the West. But pressure from Western diplomats convinced many Middle Easterners to go easy.

•
Discount—for the time being—the idea of Britain seeking a big private loan from U. S. banks.

London has the security, all right. Britain has paid up the last instalment on its 1941 RFC loan; the dollar assets of British insurance companies held as collateral in the U. S. have been released.

But London financial men look on such a loan as "no solution." It would merely hock future dividend receipts. And they add that Britain doesn't yet desperately need an immediate lump sum as it did in 1941.

•
Some of Chancellor Butler's anti-inflation measures seem to be taking hold (page 181). The sharp slump of government securities on the London market stands as evidence.

The easy-money bubble has burst. Just the warning of credit curbs to come has produced widespread selling of governments by businessmen who want to be sure of ready cash. The higher interest rates are helping to bring the big demand for capital and the short supply of savings closer together.

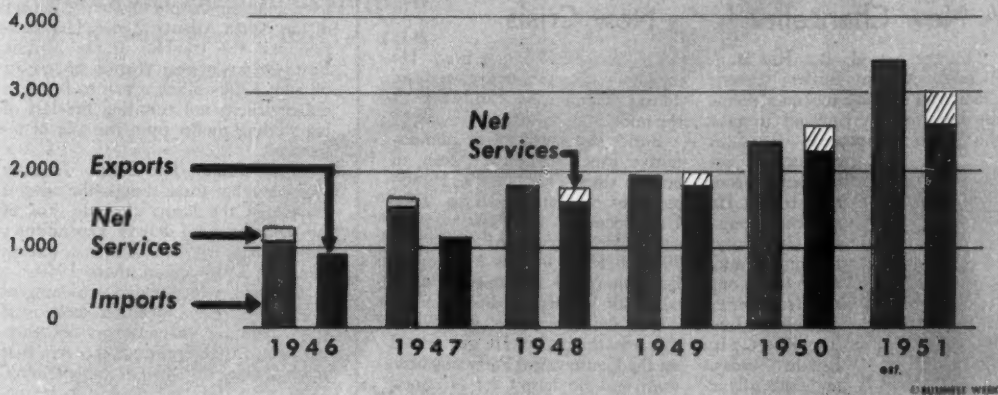
Bankers are anxious—but approving. Over-all, the effect on British business has been startling. Illusions have vanished. Management men seem to be battenning down the hatches for a stiff fight for economic survival.

BUSINESS ABROAD

British Finance: A Scoreboard

(Figure in Millions)

	1946	1947	1948	1949	1950	1951
FOREIGN TRADE BALANCE	£344	£545	£29	£21	£221	£400
	Deficit	Deficit	Deficit	Credit	Credit	Deficit



Britain Needs U.S. Dollars—Or Else

It'll take \$1-billion a year, lots of steel and tools, more rubber buying to keep her going—and no end in sight.

Over the next two years the U.S. will probably have to put up \$2-billion in military and economic aid to keep Britain from going bankrupt.

That's about three times what Washington had figured on giving London under the mutual security program. And even then there'll be no assurance that Britain can remain an industrial and military power—unless we move on to a permanent subsidy scheme or merge the dollar and sterling areas.

The present British crisis is the third since World War II. It has been building up since summer. But not until the Churchill government took over late last month was its full seriousness appreciated either in London or Washington. It became clear then that the \$600-million loss of gold in the third quarter would be repeated, or exceeded, in the fourth. At that rate, Britain would be insolvent within a year.

• **Quick Dose**—Britain's new Chancellor of the Exchequer, Richard Austen Butler (cover), stepped in fast with first-aid

measures. On the one hand, he ordered imports cut by \$980-million a year and asked for similar action by the overseas Commonwealth countries. On the other hand, he gave the domestic economy a dose of medicine. The bank rate was raised for the first time in 12 years; the Bank of England was given power, for the first time in 19 years, to limit the daily supply of cash to the banking system (BW—Nov. 17 '51, p. 176).

But Butler's measures won't bring a real cure. They would do that only if they were followed up by (1) heavy cuts in nondefense government spending, including welfare expenditures, and (2) even tighter credit controls. Such a policy might impose some discipline on the inflated British economy, ease the overload on industry, and deflate consumption, permitting more exports.

It looks now, though, as if the Conservative government has too slim a majority to risk such drastic medicine.

• **Hence**—That leaves only one out for Britain: U.S. aid to the tune of \$500-

million during the next six months, plus an agreement to forget the interest (\$75-million) on our 1946 loan to Britain. Looking a little further ahead, it seems certain that London will need \$1-billion a year for at least two years. That figure might be considerably lower, though, if the aid were largely economic rather than military.

Britain also needs U.S. steel this winter. The shortage is put at 1-million tons of semifinished items, which are desperately needed for rearmament. In addition, Britain would like (1) bigger allocations of sulfur, metals, and machine tools, and (2) renewed U.S. buying of tin and natural rubber.

Unless the situation changes drastically for the worse before then, these are the things Churchill will be after when he comes to Washington early in January.

I. Washington Viewpoint

For its part, the Truman Administration is ready to go a long way to help Britain out of its present predicament. The big reason: The European rearmament program is depending very

heavily on maintaining Britain as a going concern.

But American officials, like Churchill, are hoping that sufficient funds can be found through the mutual security program. They want to avoid asking Congress for special aid to Britain.

• **Modest Beginning**—Original estimates for the mutual security program assumed Britain would need neither economic nor so-called "additional" military aid. All Britain was to receive from the U.S. were "end items"—military equipment worth between \$300-million and \$400-million. The largest

allocation for end items was made to France—\$1.7-billion—because she is providing the bulk of the European ground forces.

Now that a French economic crisis has exploded simultaneously with the British one, Washington officials know the mutual security program must be modified.

Congress will probably be requested to permit the Administration to divert more than the present 10% from military funds to economic aid. What's more, officials believe Congress will have to be asked to restore for Britain,

France, and Italy the \$1-billion that was cut out of the original economic aid request.

II. Nature of the Crisis

Of course, there are some abnormal features about the present British crisis. Soaring world prices since Korea have raised the British import bill by 50% so suddenly that even a highly flexible economy could not have adjusted itself without some strain. Britain has certainly tried to adjust. In fact, British exports during the first 10 months of 1951 have been nearly 30% above the same period in 1950.

Britain's foreign defense expenditures have gone up sharply under the impact of the North Atlantic Treaty Organization and the troubles in the Middle East. On top of that, the loss of Iranian oil adds \$300-million a year to Britain's dollar deficit, not counting the loss of big sterling profits from the sale of refined oil.

• **Three Strikes**—The British Treasury estimates that three things—the adverse change in the terms of trade, loss of Abadan, increased defense expenditures abroad—have pushed Britain's foreign spending £600-million above 1950.

This makes the sudden worsening of Britain's financial position look as if it's largely due to temporary adversity. But, equally, the previous recovery that resulted from devaluation in September, 1949, now looks largely due to temporary advantages.

• **Yardsticks**—You can best understand today's crisis by comparing it with those of 1947 and 1949.

The 1947 bust came as a result of the attempt to make the pound convertible at a fixed exchange rate without big enough monetary reserves. At that time, world reconstruction demands were extremely heavy, but Britain's productive facilities had recovered barely enough to take care of domestic reconstruction needs. The world couldn't buy in Britain; but it could in the U.S. That made the pressure to convert pounds into dollars almost irresistible.

The 1949 crisis was very different. Although the over-all British trade and payments position was in balance (chart, page 181), a special dollar deficit developed. British exports were selling well everywhere except in North America. A small drop in American prices, while British prices remained inflexible, slashed sales of British goods in the U.S. market.

The mild American recession of 1949 fell hardest on luxury goods, which form a large part of British dollar sales. At the same time, dollar earnings of the overseas sterling countries were cut as the U.S. reduced its stockpiling of raw materials. In this situation, a run on sterling started, with encouragement by

A New Chancellor for a New Crisis

On the record, the Rt. Hon. Richard Austen Butler (cover), Chancellor of the Exchequer, seems the last man in England to take the grim, unpopular measures



needed to set the British economy straight. He has the reputation of always treading a middle course among the strong views pressed on him by others. In Britain today, and especially in Churchill's Cabinet, Rab Butler will be bombarded from all sides.

Butler's background is a little like that of Lord Keynes: Both

men's parents were scholars, both their fathers heads of Cambridge colleges. Butler's father was master of Pembroke, after 37 years' service in India, where Rab was born in 1902. Rab's mother was a distinguished mathematician. But he was never touched by the Cambridge tradition of math and economics. Instead, he took brilliant honors—a Double First—in history and French.

• **Milestone**—The most important event in Butler's life was his marriage, in 1926, to Sydney Cortauld. She was the daughter of the late Samuel Cortauld, mogul of British rayon manufacturing. She made Rab into a public figure. And she steeped him in the crushing paternalism of Cortaulds, Ltd.—in her father's ideas on state planning, industrial self-government, profit-sharing. That's where Rab's pe-

culiar "socialism" comes from. He distrusts economic liberalism, doubts competition can work in the mid-20th Century.

Butler has had a lot of administrative experience. He's been in politics since 1929, first as Undersecretary of State for India, then Undersecretary for Labor, afterwards for Foreign Affairs. From 1941 to 1945, he was Minister of Education and revamped popular education in England and Wales.

But, during wartime, Rab Butler did something else. He got a hold on the Conservative Party organization; and he hasn't let go since. That's the secret of his power with Churchill.

• **Strong Hand**—If Churchill had had his way, Butler wouldn't be holding the economic reins. Churchill wanted Sir John Anderson in the Cabinet, with a kind of super-responsibility for things financial. That would have left Butler as a watered-down Chancellor, concerned with ways and means. But Butler wouldn't buy, and he stopped Churchill's deal in its tracks.

That was the first hint that perhaps a stronger Chancellor than expected had arrived. Then came Butler's stern first-aid measures—drastic import cuts, an increase in the British bank rate. And with them came a warning that will ring in British ears for a long time: "If we do not find the means to correct the disparity between what we earn and what we buy, we shall find that we cannot buy what we want. We shall lack the materials to maintain employment, and keep rations even at their present levels. We shall in fact be bankrupt, idle, and hungry."

Finding those means will be Rab Butler's job.

We need 3000 Carloads of Scrap a Day

Every pound of dormant scrap
you can furnish will help to
keep the steel mills and
foundries producing



Steel mill furnaces are gobbling up scrap faster than it's being delivered. To maintain planned schedules of steel production for both military and civilian purposes, the mills must have more iron and steel scrap.

Get in the Scrap—Yourself!

Whatever your business, you undoubtedly have scrap. If there's dust on it or rust on it—it may be scrap. If it's scrap—it's needed.

Turn it over to your local scrap dealer and help lick this critical scrap shortage.

What you can do to help

1. Appoint one top official in your plant to take full responsibility for surveying the plant and getting out the scrap.
2. Consult with your local Scrap Mobilization Committee about its program to help out in the scrap crisis. The nearest office of the National Production Authority, Department of Commerce, can tell you who your local Scrap Mobilization chairman is.
3. Call in your local scrap dealer to help you work out a practical scrapping program. Non-ferrous scrap needed, too!
4. Write for free booklet, "Top Management: Your Program for Emergency Scrap Recovery", addressing Advertising Council, 25 W. 45th St., N. Y. 19.

SCRAPPY SAYS:

AID DEFENSE
MORE SCRAP
TODAY...
MORE STEEL
TOMORROW



FACTS YOU SHOULD KNOW ABOUT STEEL PRODUCTION

Steel production.....	1950.....	97,800,000 net tons
Estimated capacity.....	1952.....	119,500,000 net tons
Purchased scrap used*.....	1950.....	29,500,000 gross tons
Estimated purchased scrap requirement*.....	1952.....	36,200,000 gross tons

*All consumers

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Next "clues" section appears Dec. 1

the U.S. Treasury's openly expressed view that the pound ought to be devalued.

• **Rise . . .**—During the first nine months after devaluation, the dollar imports of Britain and the sterling area were drastically cut. Gradually, Britain's dollar exports began to expand. And long before Korea, sterling area shipments of raw materials to the United States began to rise both in price and volume.

Korea greatly accelerated the scramble for wool, rubber, and jute. This yielded a huge dollar surplus that sterling area producers sold to London for pounds. London's gold reserve was boosted further by a reversal of the financial bear position and by a huge German speculation in sterling commodities. Last December London and Washington agreed that ECA aid to Britain should be suspended.

• **And Fall**—But by the spring of 1951 British fortunes were in reverse again. Britain's own trade gap reopened in May and widened fast. After midyear the sterling area's dollar surplus turned into a deficit. It reached a critical stage

in October, when London lost \$320-million in gold.

III. What Hope for Future?

Even if Britain scrapes through the next two years with U.S. help, there are some important questions to be asked about the future. If Britain is thrown critically off balance every time there is a moderately adverse swing in world conditions, how would it ever stand a world recession?

Up to now, Britain's competitors in Germany and Japan have been almost out of world markets. A lush domestic market has kept American exporters from pushing hard in competition with Britain. At the same time, American imports have been consistently high, thus making it relatively easy for Britain to earn dollars. What is going to happen when these advantages are gone?

• **Much Credit**—Of course, Britain can make a case for what it has achieved since 1945. At the end of the war its cities and industries were heavily damaged, its people tired, its trade channels



. . . And Never the Twain Shall Meet

Last week President Truman appointed Edwin A. Locke, Jr. (right), a vice-president of the Chase National Bank, to a tough job: administrator of U.S. economic aid in the Middle East.

Also last week, as if in answer to the President, Sheikh Mohammed Farghali (left), boss of the fanatically nationalist Moslem Brotherhood in Egypt's canal zone, vowed to rid the Middle East of all Westerners. The Sheikh and thousands like him automatically distrust, even hate, Locke and the job he wants to do. That job is to coordinate U.S. policy in the Middle East and to raise the wretched living standards that

feed Sheikh Mohammed's blind nationalism and invite communism.

As a starter, Locke will have \$160-million to divvy up between the Arab nations and Israel. He'll have to see that the money goes where it's needed, not into the coffers of corrupt rulers. He'll have to win the confidence of millions of Moslems, wean many of them away from the policies of Sheikh Mohammed. He'll have to find honest leaders to help him do the job.

Locke has his work cut out for him. And the success of his mission—or lack of it—may determine which way the Middle East goes from here on.

dried up, its overseas investments badly hurt, and its overseas debt greatly expanded by the huge sterling balances. In this situation it looked as if the British empire was ripe for a complete breakup.

But with the help of a U.S. loan and later the Marshall Plan, Britain has raised its manufacturing production by 50% and its export volume by 70% above prewar. It has also made the necessary shift from the prewar emphasis on low-grade industries like coal to the high-grade metalworking industries. Large capital exports have gone to build up the Commonwealth. Thus Britain has been able to hold its old empire markets.

• **Not Enough**—But all this hasn't been enough. That's partly because Britain's weakness antedates World War II. The country had been losing ground in world trade since as early as 1900, and particularly since 1919. Younger competing nations, such as Germany, Japan, and the U.S., were showing more push at a time when industrialization in underdeveloped countries was narrowing markets for consumer goods.

This threat to the British position was disguised during the 20's and 30's by unusually favorable terms of trade. If the quantity of British exports needed to buy one unit of imports in 1900-1913 is put at 100, then the figure was 80 through the 20's, and 72 during the 30's.

Even so, Britain had a small annual deficit in its balance of payments during the 30's—a time when Germany and Japan were concentrating a lot of their industry on rearmament. No one in Britain worried much over this deficit, however, because Britain's overseas investments remained large.

• **Postwar**—Since 1945 many of Britain's industrial weaknesses have been remedied. Much equipment has been modernized, and the managements of many companies have been rejuvenated. Three-million more workers are on payrolls today than in 1938; that largely offsets the inefficiencies that remain.

It is still true that British management ideas have been softened by cartel psychology, by state controls, and by continuous creeping inflation that keeps order books full and profits easy.

There's a good deal of truth in the warning recently given by Colin Clark, the famous British economist, in the *Manchester Guardian*. He says the British people are afflicted with three economic illusions: (1) that food imports will become cheap again, (2) that taxes can reach 40% of the national income without depressing production and generating inflation, and (3) that British productivity will continue to soar.

• **The Only Hope**—Clark warns that cheap food for Britain has gone forever

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WALTER A. PETERSON, Treasurer
October 31, 1951.

and that excessive taxes are bound to cause wild inflation. He states that real productivity in the whole economy has gone up only 5% since 1938. Britain's only hope, he says, lies in the immediate reduction of living standards, a heavy cut in food subsidies and welfare services, and deliberate disinflation.

These ideas are shared, at least in a watered-down form, by many British economists and financial writers. These men do not attack the welfare state as such, but claim that some of the benefits of the welfare services could be sharply reduced without damage to national morale. One example: Half the food subsidies, which cost £400-million a year, go to people not needing help.

The tax load undoubtedly impairs incentive to all income brackets. Workers dislike overtime because their extra pay puts them in a higher tax bracket. Big executives refuse additional responsibilities because the extra income is trivial when the surtax rate is 97%.

• **Solvency?**—A quite tolerable cut in living standards could probably restore Britain's solvency in short order—though the long-term problem of whether the country can continue to live by foreign trade would remain unsolved. But it looks as if it will be politically impossible to do even what's necessary for the short run. The British people are dissatisfied with their present living standards, want them to go up rather than down. As long as Britons believe a steady improvement is possible and blame any politicians who do not produce that improvement, no party in Britain is likely to apply the surgical remedies that the British economy needs.

That leaves the real decision up to the U.S.—whether to bail Britain out for a while longer, perhaps until the British people are reconciled to the hard facts of their new position in the world.

BUSINESS ABROAD BRIEFS

50% of the profits is what Kuwait's Sheikh Abdullah will get from his new deal with Kuwait Oil Co. (jointly owned by Anglo-Iranian and Gulf). Announcement is expected within a week. Recently, Kuwait has been producing crude at the rate of 25-million tons yearly, only 5-million tons below Iran's pre-nationalization output.

• **Two Texans**, from Houston, will start shipping lead to the U.S. from Guatemala in January. The Corzeliuss brothers have opened a smelter there, hope to send 1-million lb. monthly to New York for further refining. They hope to produce zinc and silver, too, from mines in northwestern Guatemala.

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Jawbone Economics

How the Administration can set the law of supply and demand on its head for a while by a well-organized jawbone campaign is illustrated in the case of cotton.

When the government's experts totted up reports of their crop correspondents the other day, they came up with an estimated cotton harvest of 15,771,000 bales. From the reaction in the marketplace, you might have thought a crop of that size was dangerously small.

Actually, that's the third-largest harvest of the last 20 years. The only way it can possibly be used up is through exports, largely on the cuff, which could cost the American taxpayer very close to a billion dollars.

Why are domestic mills scrambling to cover their future needs and forcing prices up, even in the face of this huge crop and current light demand?

The main reason is that cotton is being held off the market. When a crop of more than 17-million bales was in prospect six weeks ago, the government urged farmers to impound it under loan at official prices averaging something over 32¢ a lb. The impounding campaign started prices rising even prior to the subsequent reduction in the crop estimate.

This market action violates all past experience. Farmers tied up cotton under loan in a big way in the 1930's. In fact, Henry Wallace's ever-normal granary became known as the ever-normal quandary due largely to its glut of some 11-million bales at one time.

In those days, however, market men recognized that a surplus was a surplus, no matter who held it. Loans supported the market to be sure. But only at the loan level; impounding never sent prices kiting.

But, this year, the government's jawbone campaign worked. In addition to urging growers to hold back supplies, Washington began to talk of exporting 6-million bales. The squeeze play has kept processors worried about supplies. Prices went up, sometimes quite sharply.

Then the lower crop report capped things. The market price spurted again. Mills became even more concerned about costs and supplies. And a near-record crop began to look like a shortage.

This is a good example of what Big Government is willing to do to create the illusion of perpetual boom. It's a short-run business; it's tricky, and it's costly.

Airborne Tourists

When airmen have a tough nut to crack, they manage to find a pleasant place to do it. On Nov. 27 members of the International Air Transport Assn. will gather at Nice, France, to hammer out an agreement on transatlantic aircoach travel. Pressed by Pan American Airways, pioneer in aircoach service, IATA members face the choice of agreeing on a program or finding Pan Am going it alone come April (page 22).

Chances are good they'll reach an accord even though

Pan Am, with its proposal for a \$225 New York-London fare, is up against a solid front among other IATA members favoring a rate at least as high as \$265.

But the important thing is to get this thing going by next spring. It's time for the airlines to move boldly to expand their market. It's a chance to cut sharply into the costly subsidies that these carriers are drawing. European members of IATA especially have been dragging their feet because they do not have the American tradition of a widening market with lower unit costs.

Tourist-class air service to Europe, even though it lacks the present luxury accommodations, can hatch a brood of good things. European travel can be put within the reach of the middle-income American with only 2-3 weeks vacation time and a limited budget. A successful tourist-class service could triple the number of air travelers to Europe, to over 1-million a year. All this means a bigger civil aircraft industry, reduced subsidies for airlines from the taxpayer, a larger reserve of airplanes for times of national emergency.

Quite aside from these advantages to ourselves would be the boon to Europe's dollar-short economies. The best and the cheapest product for Europe to export is its scenery. There's a big market for it among Americans—at the right price. There's no reason why an extra half-billion dollars annually can't find its way into European hands from American tourists through this aircoach program. That means less need for our aid.

IATA members should agree at Nice to get the air tourist service launched next spring. They should price it at the lowest figure that is economical.

Concrete and Congress

The du Pont chief engineer who said he couldn't both pour concrete and attend Congressional hearings hit a note that echoes. Granville Read's protest was that the hydrogen plant he was building for the Atomic Energy Commission would be slowed if he spent too much time telling Congress how du Pont hires workers.

Read has a good case. But the plain truth is that business and government are so thrown together now that they must work out details as well as major policies.

On matters like taxes, labor, and legislation, business is reconciled to spending time and money. Congressional hearings are now becoming another big time-taker. Junior executives may dig out the figures and prepare draft statements, but no company can afford to send to hearings less than its best brains. This costs real money and the valuable time of key company men.

What can business do about it? Du Pont like every other company is under obligation to tell its story when asked. But Congress, after all, is the active party in the matter. Its responsible leaders must restrain members who conduct hearings for their own political glory or pervert them for private or party publicity purposes. There lies the only real hope for bettering this bothersome situation.

Montesquieu *on the nature of liberty*

ARTIST: EDITH JAFFE

Political liberty does not consist in an unlimited freedom. . . . We must have continually present to our minds the difference between independence and liberty. Liberty is a right of doing whatever the laws permit, and if a citizen could do what they forbid he would be no longer possessed of liberty, because all his fellow-citizens would have the same power.

(The Spirit of Laws, 1748)



News about
B. F. Goodrich Chemical Company raw materials



B. F. Goodrich Chemical Company does not make these finished products. We supply only the Geon latices.

for cars, shelves, and unbeatable drums!

New developments in the use of versatile Geon latices

THESE are a few of the things manufacturers are doing with coatings of Geon latices on paper, textiles, fiberboard and other materials to create new, saleable products.

Boxes for baked goods and similar "greasy" foods are coated with Geon latex to provide grease and moisture resistance.

Decorative wrapping paper coated with Geon latex has a glossy surface, attractive yet tough. Non-woven fabric impregnated with Geon latex is washable, resists grease and oil and is made strong enough to polish a car. Interior and exterior Geon coatings for fiber

drums give them longer life, washability as well as protecting the walls from greasy or corrosive contents.

Geon latices are easy, safe and economical to use. Being water dispersions of vinyl resins, there are no solvent problems—no fire hazards or costly recovery systems—in processing.

Such is the versatility of the Geon family of latices that many new uses can be expected as more manufacturers become acquainted with them. Each Geon latex in the family is specially designed for certain types of applications.

Our technical service is ready to help you select the Geon latex best suited

for your use. Write for the Geon Latex Chart, and for the new booklet, "Packaging Problems Solved With Geon". Please address Dept. A-12, B. F. Goodrich Chemical Company, Rose Bldg., Cleveland 15, O. In Canada: Kitchener, Ontario. Cable address: Goodchemco.



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